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C-3 AND ADJACENT DISTRICTS

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WORKING PAPER NO. 2

July 1966

DEPARTMENT OF
CITY PLANNING
100 Larkin Street
San Francisco, California

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Preface

Working Paper No. 1, printed in February 1966, described the first six months of work in the Downtown Zoning Study, setting a framework of information and preliminary conclusions on which detailed zoning evaluations could be based. This second Working Paper continues from the point at which the first paper left off, and leads up to the final report which will be published in the fall. Work is now under way on refinement and testing of the zoning provisions described in this paper, and on explanatory materials for presentations and for the final report itself.

As has been the case all through this Downtown Zoning Study, community participation is earnestly sought. These Working Papers not only serve as a base for further work in the study; they also serve, together with the Progress Reports issued monthly, as a means of informing the public of the progress of the study and stimulating their interest and their responses.

TABLE OF CONTENTS

	Page
SUMMARY OF WORKING PAPER NO. 2	1
ZONING EVALUATIONS	2
A. General Zoning Principles	2
B. Provisions as to Use	2
C. Provisions as to Building Bulk	4
D. Zoning District Boundaries	6
E. Provisions as to Off-Street Parking and Loading	7
F. Special Requirements	8
G. Development Bonuses	9
H. Transfer of Development Rights	11
I. INVESTIGATION OF DOWNTOWN PLANNING AND ZONING IN OTHER MAJOR CITIES	13
Summary of Bulk Provisions for Downtown Commercial Buildings in Major Cities	20
II. DEVELOPMENT ECONOMICS	26
III. URBAN DESIGN ASPECTS	32
A. Skyline	35
B. Views	36
C. Determinants of Character of Certain Areas	38
D. Areas Affected by Specific Programs	46
E. Specific Existing Buildings	48
F. Public Open Spaces	48
G. Pedestrian Movement and Other Amenities for Pedestrians	50
H. Amenities for Persons in Vehicles	54
I. Amenities for Building Occupants	55
IV. CHARACTERISTICS AND REQUIREMENTS OF SPACE USE AND ACTIVITY (SUPPLEMENT)	57
A. Building Space Inventories	57
B. Results of the San Francisco Downtown Parking and Traffic Survey	64
C. Travel to Downtown by Public Transit	74
D. Downtown Traffic Flows	75
E. Parking for Hotels	76
F. Parking for Apartments	77
G. Concluding Remarks on Parking and Traffic	80
APPENDIX	
List of Maps and Tables	

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SUMMARY OF WORKING PAPER NO. 2

This Working Paper continues in the same format as Working Paper No. 1 and makes a number of significant additions, as outlined below. It also contains, immediately following this Summary, a section entitled ZONING EVALUATIONS, based upon the two Working Papers, which sets a framework for the final stages of this study and describes the types of zoning standards now being considered.

The body of this Working Paper No. 2 is made up of the following parts:

1. Investigation of Downtown Planning and Zoning in Other Cities. This is a summary of the study methods used by other major cities, their zoning provisions, and the practical effectiveness of these provisions. A portion of this material was contained in Progress Report No. 9, dated April 1, 1966. Projects for the development of zoning standards specifically for downtown have been unusual in other cities, but such projects have been increasing in importance because of the increase in downtown problems and the need to make downtown issues more explicit. It may be concluded that where the standards developed have been carefully drafted, made understandable, and well related to downtown planning and anticipated future needs, they will tend to stimulate rather than retard downtown development.

2. Development Economics. This section is concerned with a wide variety of factors in building economics, brought together through interviews with persons in the construction, development, financing, sales and rental, and management fields, other research, and employment of a special economic consultant for this study. Among the objectives of this investigation are the avoidance of over-restrictiveness in the zoning standards chosen in economic terms, evaluation of the sections of downtown in terms of enhancement of their development potential, and the structuring of positive aspects of the zoning proposals, such as bonuses, so that they will work effectively for better downtown development.

3. Urban Design Aspects. This analysis builds upon previous work, some of which is contained in Working Paper No. 1, and sets out an organized inventory of urban design attributes or "design resources" in the downtown area, with an indication of those attributes which are most susceptible to being affected through zoning. It is recognized that zoning, while concrete in its application, has only a limited positive influence upon urban design, and that there are many other influences. Nevertheless, this inventory of urban design attributes leads to some direct conclusions as to the role that zoning can play.

4. Supplement on Downtown Space Use and Activity. The material in this section adds to a similar section in Working Paper No. 1. It supplements previous material on inventories of major buildings, space capacity and development trends, and provides new data on downtown parking supply and demand from a recent survey of the Department of Public Works and other sources, as well as analysis of other transportation factors affecting zoning.

5. Appendix. At the end of the paper are further statistical materials in table form, and a series of 17 maps of basic information pertaining to both this paper and Working Paper No. 1, now drafted for reproduction and permanent record.

It is the purpose of this commentary to set out in as much detail as now possible the zoning framework being used in establishing precise standards and boundaries. There is a close relationship, and, indeed, often a precarious balance between the types of standards chosen, the numerical limits which are set for these standards, and the boundaries drawn on the zoning map.

Such relationships are now being tested, and the standards and boundaries evaluated in terms of their probable effects upon the adequacy of space for all downtown functions, the feasibility of individual building projects, the network of downtown accessibility and circulation, and urban design attributes in the downtown area.

A. GENERAL ZONING PRINCIPLES

This is an opportune time for more refined zoning in downtown San Francisco, and an improved ordinance is overdue. The zoning proposals should be related to the new directions being taken by downtown development, to past downtown planning work and to the many current downtown programs.

San Francisco has exceptional downtown advantages, and deserves the best and most imaginative zoning solutions in the country. The ordinance should address itself to as many of the downtown area's problems as possible, keeping in mind that only certain of these problems are susceptible to zoning solutions and that there are other, sometimes independent, programs and influences.

Controls over free choice in downtown development should be kept to a minimum, with each control based upon demonstrated needs. This implies simplicity in the ordinance provisions, and a maximum of appropriate flexibility and options.

A total capacity for downtown development should be provided which is well in excess of anticipated needs, in order to allow for a maximum of development opportunities. And although it is recognized that new zoning provisions cannot provide for inflated or impractical expectations in all cases, past and current transactions, expectations and building plans should be taken into account to the extent possible. In this connection, it is being urged that any present preliminary plans for major buildings in the downtown area which approach the present City Planning Code limits be made known to the Department of City Planning.

B. PROVISIONS AS TO USE

There are a number of reasons for creation of separate zoning districts. Wherever it is desirable to vary, on an area basis, the types of uses permitted, the limits on bulk of buildings, the amount of off-street parking required, or other factors, a separate district may be created. It is, of course, necessary to limit the total number of districts for reasons of simplicity and equity, and it is intended that the Downtown Zoning Study recommend neither more nor fewer districts than appear to be called for by downtown conditions.

The districts recommended may tend to be thought of in terms of the uses permitted, since it is traditional to refer to the main zoning districts as "use districts" and to name them according to the types of uses permitted in them. The uses permitted may differ only slightly among the downtown zoning districts, however, and the scale of development and the presence or absence of parking requirements may be the most important characteristics of a given district rather than use. Nevertheless, uses which are clearly incompatible must be segregated. This is particularly true of the incompatibility of residential, hotel, retail and office uses on the one hand, with heavy commercial and industrial uses on the other, particularly those that are oriented toward motor vehicles.

It has been emphasized throughout this study that the present C-3 Zoning District is not adequate for downtown San Francisco's needs, since the C-3 District and zoning districts adjacent to it do not correctly reflect the nature of the downtown area or of the subareas within downtown. The Downtown Zoning Study has concluded that there is a need for four downtown commercial districts:

1. A downtown office district, to accommodate the highest intensity of downtown development, predominantly for office buildings. Heavy commercial and industrial uses would not be permitted in this area, but related retail and service uses would be permitted. It is possible that apartment houses should not be allowed, in order to preserve available sites for office buildings.

2. A downtown retail district, having as its primary purposes the encouragement of amenities for shoppers and assurance of continuity of retail frontage at ground level along the streets. Permitted uses other than those for retail trade or customer service would be required to be located on upper floors or at other locations away from major street frontages.

3. A downtown support district, located in the South of Market area, to accommodate near the core area important supporting functions such as printing, building maintenance, wholesaling, contracting, automotive repair, trucking and parking. Major new developments such as those contemplated in the Yerba Buena Center redevelopment project, an urban university, and perhaps specialized types of residential development, would be suitable for this area if of sufficient size to create their own environment. Offices at a lesser intensity than in the main office district would also be suitable.

4. A general downtown commercial district, to cover the remaining commercial areas north of Market Street adjacent to the office and retail core and westward along Market Street to Van Ness Avenue. A large variety of uses would be expected in this district, including offices, retail, hotels, apartments and some services, but few if any heavy commercial or industrial uses.

Other downtown areas outside of the main commercial sections call for special zoning attention or special districts. These are:

5. The combined residential-commercial area on the south slope of Nob Hill within the present C-3 District, extending southeastward to the main hotel area. This area is, predominantly, one of residential uses on

upper floors and related retail and personal service uses on the ground floor, and the zoning should more clearly reflect this use arrangement. Mixed-use buildings are especially suitable to this and other areas, and should be encouraged.

6. The Nob Hill special use area at the top of Nob Hill, in which the types and arrangements of uses should be carefully controlled.

7. The Van Ness-Polk area, where the predominant uses are automotive sales and service but other types of uses have been installed in recent years. Special consideration is required for this area.

8. The Jackson Square-North Beach area, where the principal problem now is the inadequacy of parking facilities, and where the use provisions are also critical since existing commercial and industrial zoning districts are not suitable to reflect the types of uses which are located in Jackson Square.

In the writing of zoning district use provisions, the principle of enumerating permitted uses for each district will be followed, as in the existing ordinance. But an attempt will be made, as some other cities have done, to list the permitted uses in simpler and more straightforward order, using statements of purpose, tables and possibly use groups. Ideally, such listing would be extended to all commercial and industrial districts in the ordinance, including those outside of downtown.

C. PROVISIONS AS TO BUILDING BULK

The term building bulk as used here refers to the size of a building in relation to the size of its site, so that it is a question of the intensity of development rather than the height or absolute size of buildings.

The highest bulk or intensity of buildings would be provided for in the office district. Other downtown districts would have a lesser maximum intensity than the office district, and would not differ greatly from one another. The intensity permitted in the retail district would recognize the high potential for development in that area, particularly for mixed use buildings. Properties nearest Market Street would be permitted a greater intensity than those further away, but this is expected to be accomplished through the bonus system, as discussed below.

In setting the exact figure for the basic maximum bulk or intensity in each district, there are a number of factors to consider. Among these are the following:

1. The capacity in the downtown area for each type of use and building to be accommodated, particularly in the district in which this type of building is predominantly located, as compared with growth projections and the present pace of downtown development.

2. The intensities of buildings already existing in the downtown area, both individually and as averaged on a block or area basis. The buildings most recently constructed are of greatest significance in this respect.

3. Current and future trends in building design and construction techniques.

4. Land and building economics involved in putting together and constructing an individual project.

5. The variety of investment and location opportunities that should be provided for in the downtown area.

6. Ease of accessibility to an area and circulation on the streets within it.

7. The outer limits at which downtown amenity needs demand control of building bulk.

8. The basic bulk limit required to encourage developers to make use of the bonus system being developed, as described below.

9. As a byproduct of other factors, the overall form of the downtown skyline.

The items just listed are being considered in arriving at basic bulk limits to be proposed.

The form of the bulk limit would be as it is now, in terms of a floor area ratio, or ratio of the total floor area in the building to the area of the site occupied by it. The floor area ratio is now used in most other cities, including those which are most similar in their downtown characteristics to San Francisco.

Consideration has been given to other types of intensity ratios, and particularly to the concept of a cubeage limit, related to the total volume of a building rather than the floor area it contains. The cubeage limit, though used at times in other cities, is considered impractical, because while it truly reflects the volume of a building it is not always closely related to the intensity of use on the site; because it may have to be coupled with complicated exceptions and bonuses in order to be practical; because this limit discourages variations in story height which may at times be desirable; and because the cubeage concept is not well related to methods of computation commonly used by developers.

This discussion of cubeage does indicate a type of improvement that might be made in the present floor area ratio system. In order to reflect better the total volume of a building, the measurement of floor area should be related to the average story height of the building. This is one of a number of adjustments that should be made in the present definition of floor area ratio as it concerns the method of measurement and the building areas included and excluded in the computations. Other definitions in the present ordinance related to floor area ratio, such as those describing the land area that constitutes a lot for zoning purposes, should be revised at the same time.

D. ZONING DISTRICT BOUNDARIES

The present C-3 Zoning District, inadequate in its standards, is also imperfectly drawn in its boundaries and does not describe what is truly downtown San Francisco. Some of the present C-3 boundaries were established on the basis of the high building bulk and exemption from off-street parking requirements afforded by that district, rather than on the basis of the proper scope of downtown functional areas. In some cases the boundaries of adjacent commercial and residential districts are also not well formed, due to the somewhat over-simplified nature of the districts now contained in the zoning ordinance.

The downtown functional areas,described in the 1963 Downtown General Plan Proposals and in earlier parts of this study, are more definite in San Francisco than they are in most other cities, and the areas of growth and expansion are better indicated. Also, programs such as the installation of regional rapid transit on Market Street and two major redevelopment projects are helping to give a clearer shape to downtown. These functional areas and public programs are major determinants of zoning district boundaries.

The scope of downtown would be better described than before by the boundaries of the four new downtown commercial districts. The heavy over-balancing of downtown zoning to the north side of Market Street would be corrected to place Market Street, the transportation spine, more at the center, with downtown zoning occupying more area than at present on the south side of Market and less area on the north. The greater part of the increase South of Market would be due to the addition of a downtown support district to the downtown area, and the most significant decrease north of Market would be through the placing of predominantly residential areas in a residential-commercial district.

In the setting of boundaries for individual zoning districts within downtown, the overall transportation network is significant. Also important are topography, the existing functional areas, and the need to keep these functional areas, especially in the office and retail core, compact and efficient. At the same time, however, there is a somewhat conflicting need to allocate new areas for expanding functions, and to stimulate development in underdeveloped areas. Additional criteria for boundary selection include the ease of pedestrian movement between districts, and the desirability of smooth and sometimes gradual transitions between districts, particularly to guard against abrupt changes in the types of uses permitted and the standards for building bulk.

In general, the boundaries of the four downtown commercial districts described above would be as follows:

1. The downtown office district would extend to the Portsmouth Corridor at Washington Street on the north, to the foot of the Nob Hill slope and the retail district on the west, to the Yerba Buena Center project and the Trans-Bay Terminal on the south, and to the Embarcadero on the east.

2. The downtown retail district would cover the present area of high-intensity retail use, reaching to the office district on the east, the Stockton Street tunnel on the north, the hotel-entertainment area on the west and Mission Street on the south, with some expansion westward near Market Street to take account of the future area of influence of the Powell Street transit station.

3. The downtown support district would form a band approximately two blocks wide immediately south of the other downtown districts, running from the Embarcadero westward to a point near the Civic Center. The Yerba Buena Center project would be near the middle of this district, and the area east of that project would be expected to have a certain amount of new office development of medium intensity, while the area west of the project would remain in heavy commercial use under present circumstances.

4. The general downtown commercial district would be mapped in these areas: along the Portsmouth Corridor to provide a transition to the low intensity Jackson Square area to the north, west of the office district from Portsmouth Square to the retail district, in the hotel-entertainment area west of Union Square to its junction with residential areas to the north and west, and in the vicinity of Market Street west of the retail district to Van Ness Avenue.

E. PROVISIONS AS TO OFF-STREET PARKING AND LOADING

Access and circulation are keys to downtown development in any city, and failure to match development standards to the facilities for movement of persons, vehicles and goods may put a brake on downtown growth. Of particular significance are the high-intensity office and retail core areas, where streets are taxed to their capacities and pedestrian-vehicle conflicts are greatest. In addition, in all parts of downtown, facilities for the movement and storage of surface vehicles are a major user of downtown land, in competition with other land uses.

In order to recognize these facts, zoning should relate requirements and incentives for the provision of off-street parking to the need of various types of buildings in the downtown area for service by the various transportation modes, and the ease of accessibility to them by those modes. For major parking facilities, the concept of parking belts adjacent to the inner downtown core, to intercept automobile traffic before it reaches the core, is favored.

For individual commercial building developments, no off-street parking would be required by the zoning ordinance for any of the four downtown commercial districts, a continuation of present policy for the C-3 District. The office, retail and general downtown commercial districts tend to be tight in their present patterns of development, putting a premium on the availability of land for development and causing intense competition of vehicles and pedestrians for street space. These areas are also well served by the coming rapid transit system and by public garage facilities. South of Market, the downtown support district is also served by public parking and is moderately close to rapid transit. This area, which is presently subject to full parking requirements in the zoning ordinance, has uncertainties in the required allocation of the large quantities of parking available there to individual buildings, problems in the conversion of existing buildings from one use to another, and a serious retarding of new development at prime locations. Under the new zoning provisions, present off-street parking requirements in this area would be removed.

No area outside of the four downtown commercial districts appears to warrant exemption from off-street parking requirements for commercial buildings except the section composed of Jackson Square, Broadway and adjacent parts of

Chinatown. This section has small units of development, with many existing buildings to be retained and some converted to new uses, and it is probable that it should be exempted from parking requirements for the most part, with further public garages provided.

The zoning standards should be shaped in a manner which will encourage major parking facilities to be provided in parking belts adjacent to the core. Within the core itself, major facilities should not be permitted, and conditional use approval should be required for other locations. Accessory parking, to serve the building in which the parking is located, should be allowed in the core for the convenience of building occupants, but only to a limited extent.

Special attention must be given to the parking needs of apartment buildings. Since fewer cars are owned by residents downtown than in other parts of the city, apartment buildings in the C-3 District now are completely exempted from parking requirements, together with other uses, despite the established need for storage of the cars actually owned by these downtown residents. As an alternative, close-in apartments with small units, readily accessible to downtown facilities and to public transit, and occupied by persons with only a moderate incidence of car ownership, might have a requirement of less than one parking space for each unit, with a sliding scale based upon the location of the property. Apartments in existing Residential Districts outside these close-in areas would continue to have the present requirement of one parking space for each unit.

Other aspects of the zoning ordinance affecting motor vehicles require revision. The present off-street truck loading provisions are incomplete and unsuitable for some sites. No off-street passenger loading facilities are now required for large buildings such as hotels and auditoriums, and the practicality of such a requirement is being investigated. Better standards should also be developed for the layout and screening of open parking lots, parking arrangements in the interior of structures, and methods of measuring building floor area for various parking requirements.

F. SPECIAL REQUIREMENTS

As a basic policy, the new zoning proposals would keep to a minimum any special requirements that might restrict the scope of building design or single out specific areas for closer regulation.

Accordingly, mandatory provisions concerning building shape, such as uniform building lines, cornice lines and setbacks, would generally be avoided. Devices such as sky exposure planes to assure a certain angle of light penetration to streets would be used only in cases of specific need such as, perhaps, on the south side of Market Street where large buildings should maintain a certain openness to this major pedestrian thoroughfare.

Special height limit areas are one major exception to the policy against special requirements. Height limits are already in use in San Francisco, and coming into more general use around the country, for view protection, preservation of sunlight to public open spaces, and maintaining the limited scale of buildings in areas where such scale is critical. Within the Downtown Zoning Study Area, height limits are in effect in North Beach, Jackson Square and the Civic Center area, and other limits have been proposed at Union Square and in Chinatown.

The current study has found a need for special height limits at Union, St. Mary's, Portsmouth and Huntington Squares and on Grant Avenue, to maintain the scale or openness of those areas, and for the retention of present height limits in North Beach, Jackson Square and the Civic Center area. In addition, the east slope of Nob Hill, as the principal outlook for Nob Hill views, should be considered for a modest form of view protection, preferably in the form of a height limit.

Certain aspects of downtown appearance require improvement, and to some extent zoning can be effective in assisting such improvement. Three principal types of concerns here are the screening of parking lots, already mentioned, better treatment of side building walls where adjacent buildings have been removed, and control of rooftop clutter produced by scattered mechanical equipment such as water tanks, cooling equipment and elevator housings.

G. DEVELOPMENT BONUSES

The bonus system is the heart of the ordinance in terms of positive achievements through zoning. This is a series of premiums giving additional floor area above the amount permitted by the basic maximum floor area ratio in exchange for certain building features which produce clear advantages to the public.

The present bonus system in effect in San Francisco, giving additional floor area for through lot and corner lot locations, is not effective as a means to produce better downtown commercial buildings, and it is only slightly related to public advantages which might result from construction of buildings at such locations.

Other major cities have advanced considerably farther than San Francisco in their bonus systems. Our own Downtown Zoning Study has been able to benefit from investigation of these other bonus systems and the degree of success that they have had. From this investigation, the following five rules have been derived as basic principles:

1. The bonuses chosen must be suitable for San Francisco's own needs, and not all bonuses used elsewhere will be appropriate here.

2. The basic maximum floor area ratio to which the bonuses are applied must be so scaled that there will be an incentive for developers to use the bonuses offered.

3. The purpose of each bonus, in terms of the individual site and in terms of overall downtown planning, should be made clear in the structuring of the ordinance.

4. The shaping of each bonus should be studied so that it will produce measurable advantages for both the public and the developer.

5. An upper limit should be set on the amount of each bonus commensurate with its public advantages and the total scale of development desired.

In the drafting of bonus provisions for San Francisco, attention is now being given to each of these five principles, and particularly to item (4) above for which prospective bonuses are being tested in design and economic terms. Study is also being given to the various conbinations of bonuses that might occur or be permitted on a single property, and the manner in which the types and quantities of bonuses should be varied from district to district. Also, to permit greater predictability of development potential and simpler application of the floor area ratio system in some cases, there is a possibility of an optional arrangement being used, in which the developer would use either the bonuses or a separate standard floor area ratio.

The principal types of bonuses being considered, listed according to their primary public purpose, are the following:

ACCESSIBILITY

1. Rapid transit access directly from the site to the mezzanine of a regional or future city transit station, with this access located on private property and open to the general public during normal business hours.

2. Rapid transit proximity, for sites other than those having direct rapid transit access, measured in terms of walking distance from the site to a transit station.

3. Parking access for pedestrians directly from the building to off-street parking located in a parking belt or in the downtown support district.

PEDESTRIAN MOVEMENT

4. Multiple building entrances from different streets or from widely separated points on the same street, in excess of normal Building Code requirements, in order to reduce in size the interruptions to sidewalk movement caused by large numbers of persons entering and leaving a building at any one point.

5. Sidewalk widening along the property line of the building, by means of an arcade, cantilever, plaza or setback, to allow additional width for pedestrian movement along the street.

6. Shortening walking distance from one public street to another, by use of a plaza, arcade, setback or passageway inside or outside the building, open during normal business hours, to relieve sidewalk congestion and add to pedestrian convenience.

PEDESTRIAN AMENITY

7. A deep plaza intended not primarily for sidewalk widening or shortening of walking distance but as a rest area with benches, planting and other such features.

LIGHT AND AIR TO STREETS

8. A side setback above the first few stories of the building, producing a certain openness for the street without an interruption to the facade line at the front of the building and, incidentally, yielding more window area for this building and those adjacent to it.

9. Low coverage at upper floors, as an alternative to the side setback, allowing penetration of light and air along one or more sides of the building with the choice of such sides left to the developer.

10. Location on a wide street, where the property could be developed more intensively due to the size of the open area afforded by the street itself. This bonus would apply primarily to Market Street.

VIEW PROTECTION AND ENHANCEMENT

11. Slender tower development to no more than a certain maximum horizontal building dimension, as an alternative to the side setback and low coverage at upper floors concepts, in order to provide a certain openness at upper levels and partially safeguard the views of other buildings.

12. An observation deck or other public space at the top of a tall building, at which the view from such a building could be made accessible to the general public.

Further study of these bonus possibilities will determine the relative weight that each should be given, and whether, perhaps, some should be given no weight at all. Other possibilities have already been examined and discarded. For example, a bonus for large site development is thought unnecessary because of the natural economic incentives which exist for accumulation of sites and because of the manner in which some of the bonuses listed above will be most readily usable for the larger sites. Another example of a possibility which has been discarded is a bonus that might be given for development of mixed-use buildings. Again, the economic advantages of such development are already great in many cases, and there are means in the zoning ordinance other than bonuses to provide incentives for mixed use buildings.

H. TRANSFER OF DEVELOPMENT RIGHTS

As a corollary to the bonus system, and to provide larger sites for zoning purposes, means are being sought to make more explicit the manner in which development rights can be transferred between adjacent owners. As the existing floor area ratio provisions are now interpreted, a developer is permitted to acquire from an adjacent owner the rights to any unused floor area on the adjacent parcel represented by the difference between the existing floor area on that adjacent parcel and the total floor area permitted for that parcel under the applicable floor area ratio limit.

Such a system of development rights transfer has at times been criticized because it permits buildings to be constructed which are considerably larger than would otherwise be allowed on the sites occupied by these buildings, and because a higher average density for the total section of downtown may also result.

The main arguments in favor of development rights transfer are that it contributes greater flexibility to the actions of owners and developers in a given block, that it permits the established maximum floor area ratio for the district to be more closely approached, and that it contributes to the retention of some lower buildings which afford light and air to streets and which may have historical or architectural appeal.

It has been concluded in this study that the principle of development rights transfer should be retained, and that the procedures and consequences of such transfers in terms of the City Planning Code should be more clearly spelled out. It is likely that some bottom limit should be set, below which development rights cannot be transferred, in order to avoid stagnation of low buildings and open lots. An investigation is also being made of the possible effects of development rights transfer upon the retention of buildings of historical and architectural merit, since this is one of the few methods by which zoning might actively influence such preservation.

I. INVESTIGATION OF DOWNTOWN PLANNING AND ZONING IN OTHER MAJOR CITIES

One of the most significant types of background for the Downtown Zoning Study has been a survey of downtown planning programs and zoning techniques in other major cities. The experience of other cities is always valuable in a planning study of this complexity, particularly where such cities have comparable implementation techniques already in effect.

During the past year, staff members of the Department of City Planning have traveled, mostly in connection with personal trips of their own, to thirteen other cities to make first-hand observations and interview members of local planning staffs. In addition, information in depth on New York City was obtained through a visit to San Francisco by the former Chief of the New York Office of Master Planning.

Brief summaries concerning these fourteen cities are set out in the following paragraphs, and the downtown building bulk provisions of the cities are listed in a table which states in each case the basic maximum floor area ratio, mandatory building features, and features for which floor area bonuses are given. One additional city included in this summary material, Los Angeles, was not specifically visited because of the ready availability of information on that city from other sources.

A review has also been made of written materials from these cities and a number of others not visited, with a substantial library of such references now built up in the Department. Studies of downtown zoning performed as special projects in the manner of this present study in San Francisco have been found to be quite unusual, although certain elements are duplicated in cities elsewhere.

In the selection of other cities for intensive investigation, the main criteria were their size, their comparability to San Francisco in character and development, the extent of their recent programs in downtown planning and zoning, and their experience with modern downtown zoning standards already in effect.

The date appearing at the top of the narrative summary for each city is the date on which information was compiled for that city.

Toronto, Ontario, City Planning Board, April 30, 1965.

Toronto has been a leader in downtown planning work, but zoning proposals growing out of this work in the last several years have not as yet been enacted. In general, a floor area ratio of 9:1 is thought to be adequate, supplemented by a system of bonuses and controls over the set-back of upper floors. Although zoning standards are not yet in effect, they have been worked out carefully with downtown business leaders, and recent construction has tended to follow the standards called for in the zoning proposals. The Technical Planning Board has some control over downtown construction apart from zoning restrictions through use of its discretionary review powers in approval of site plans. Planning for downtown Toronto is made somewhat easier by elements of certainty produced by the metropolitan government arrangement for which the city is noted, and by the gradual expansion of the Toronto subway system to meet increasing transportation needs.

Portland, Oregon, City Planning Commission, June 28, 1965.

Portland is in an early stage in planning for its central area, with only preliminary work on trends and concepts having been accomplished to date. Several issues are of major current importance, however; one of these is the location of freeway interchanges in or near the downtown area, and another is the relationship of redevelopment projects to other downtown development. The central area has a fairly tight core, but it is not large enough for significant separate functional areas to have developed as yet. One factor contributing heavily to the compactness of retail stores in the core is the existence of Lloyd Center, described as the world's largest shopping center, within the city at some distance from the core. Special design control districts exist and have worked out well in portions of the downtown area, and there is considerable interest in retaining historical buildings such as the Pioneer Post Office. A study may be made of possible height limits at the base of hills which border the downtown area, because of the view-blocking aspects of apartment buildings recently put up in such locations.

Seattle, Washington, City Planning Commission, June 30 and July 1, 1965.

Downtown planning work has been carried on in Seattle for the past seven years. In 1962, Donald Monson was hired as a consultant to tie together much of the previous work that had been done, and to prepare a report which concerned primarily traffic circulation and zoning. This report and all other downtown work have been coordinated with the Seattle Central Association, made up of individual members with downtown interests. By the end of June, final zoning proposals were about to be enacted into law. These proposals establish floor area ratios with bonuses for open spaces around buildings. Ground floor uses will be required to be of a retail nature in the central retail core, with some offices and apartments expected to be built above such uses. Apartments will be permitted in the retail core only by conditional use, however. Parking garages will also be permitted in this area only by conditional use, and there is considerable interest in keeping above-surface garages out of the retail core altogether, if the question of easy access of shoppers to the stores can be solved. Transportation policy continues to be the overriding problem facing downtown Seattle.

Vancouver, British Columbia, Technical Planning Board, July 2, 1965.

The Technical Planning Board, composed of department heads, exercises considerable policy-making authority in planning, but must submit any ordinance proposals to the Council for enactment. Much downtown planning work has been conducted over the past 10 years, but few of the concrete proposals have been accepted by the Council. A 1961 Zoning Report has not been enacted due to an inability to get agreement on specific standards. There is, however, an interim downtown zoning district which was enacted in the 1950's. The principal concern at that time, which is now an ever-increasing problem, is the westward drift of the downtown area, which has no natural confines and suffers from lack of compactness. The Technical Planning Board is able, in addition, to exercise discretionary review of any proposed downtown construction, and has used this review to keep out some drive-in uses, require ground floor retail uses in some cases, and apply certain standards to large office buildings. Enactment of a permanent ordinance is considered a more satisfactory solution, however, as Vancouver begins to feel many of the growth pains suffered by cities in the United States.

Detroit, Michigan, City Plan Commission, September 17, 1965.

A program of total revision of the existing 1940 zoning ordinance in Detroit has been under way for several years. A special planning department staff section, with as many as eight persons, has been engaged in this work, and release of a comprehensive set of proposals is expected soon. In the overall study, attention was given to special zoning questions in the downtown area, but few changes from existing standards will be proposed for this area. Downtown Detroit has not been characterized by serious problems in building bulk, and it is thought reasonable to continue the present system of bulk controls based upon the width of streets. Movement of traffic is the most important downtown problem, since it has been the practice to build parking garages in the very heart of downtown and provide a complete freeway system to permit traffic to get there. Detroit has an overall set of design concepts that have been worked into a design plan for the central area. This design plan is being implemented only in small part by the zoning ordinance, using a few special design districts with discretionary review. Of greater importance to the design plan is the use of redevelopment projects and public improvements to implement the concepts of relationships among subareas and siting of buildings.

Boston, Massachusetts, Redevelopment Authority, September 28, 1965.

Boston has a union of planning, zoning and renewal under a single government agency, providing for a close coordination of these functions. The city has a recently enacted zoning ordinance, but this ordinance may be too conventional for a city that is moving ahead as rapidly as Boston now is. All of the downtown area is covered by renewal projects, although only selected sections are undergoing major redevelopment. The government center area is being completely rebuilt. Among the other functional areas, situated in a rather well-ordered manner around the Boston Common, the retail area is most in need of attention. Victor Gruen has been retained for planning work in the retail area, and there is likely to be an opening up of the present tight street pattern and provision of new parking facilities on the periphery. To the west of the central area is a new subcenter with the Prudential Tower, currently the tallest office building outside of New York, and a complex of convention facilities. The Prudential Tower and other new office buildings do not yet seem to have

filled the continuing demand for new office space. Several special design areas on the edges of the downtown area are of interest: Beacon Hill is an old residential area protected by State law; Commonwealth Avenue is a wide major thoroughfare with a uniform height limit; Copley Square, for which a design competition is now being conducted, also has a special height limit.

Baltimore, Maryland, Zoning Commission, October 6, 1965.

Since 1957 a Zoning Commission appointed by the Baltimore mayor under ordinance has been investigating revisions to the existing Baltimore zoning code adopted in 1931. A preliminary report and proposed ordinance prepared in 1962 did not get official review because of 1963 spring municipal elections and loss of interest. However, interest is again strong, and the director and Commission members now expect that a new ordinance, substantially modified from the 1962 recommendations, will be adopted by the legislature during the coming year. Carl L. Gardner and Richard Babcock are consultants for the Zoning Commission on this present work. Zoning provisions for the downtown area will probably include floor area ratio provisions and separate districts for functional areas within the downtown. A 70-foot historical height limit has existed approximately six blocks north of the downtown area since 1904, but there appear to be no height limit needs in the downtown area. Baltimore has an Historical Review Committee, but this committee has no real legal power to enforce its policies.

Washington, D.C., National Planning Commission; Downtown Progress (an Official Citizens Committee); and District of Columbia Zoning Commission, October 8, 1965.

All persons contacted thought that insufficient automobile parking was the major zoning problem in downtown Washington. Second in importance was the design problem which has been created by the tight correlation between the floor area ratio provisions of 8.5:1 and 6.5:1, adopted in 1958 after considerable research into accessibility to commercial buildings, and 110-foot and 130-foot height limits established in 1910. This tight correlation has given little design latitiude to architects and builders and most new construction has taken identical exterior shape. Some height limits may be relaxed but floor area ratios will be maintained as they are now. Attempts will be made to check the current expansion of high bulk office areas to the west, which has left some gaps of underused land between the retail areas and the office areas. The demand for office space is very high and a great deal of new space has been recently constructed. Special design controls through planned districts are being considered as one possible revision to the present regulations. Pennsylvania Avenue has been declared an historical preservation area.

Philadelphia, Pennsylvania, Department of City Planning, October 11, 1965.

Philadelphia is operating under a Zoning Code adopted in 1962, and no major changes are contemplated in regulations for the downtown area, other than tightening of existing sign controls. Insufficient off-street parking is a growing problem. All of downtown Philadelphia is in a redevelopment area, and the only major new buildings built in the downtown area in the last few years have all been in project areas. A wage tax in Philadelphia has discouraged many firms from building in the downtown area, and instead new office construction is occurring just outside of Philadelphia, where, in addition to exemption from the wage tax, vehicular access is better.

Federal aid to the public transit system and subsequent refurbishing of existing facilities have helped downtown commerce. Current zoning studies include investigation of the desirability of continuous commercial frontages unbroken by parking.

Pittsburgh, Pennsylvania, City Planning Department, October 18, 1965.

Consideration of possible revisions to the present C-5 zone which encompasses all of downtown Pittsburgh has been underway for about three years. The present provisions control bulk only by an 11-floor height limit, and it is felt that substitution of floor area ratio provisions for that height limit would encourage new building and result in better design. A 60-floor office building for the U.S. Steel Corporation scheduled for construction in Pittsburgh would obviously not meet this height limit, but would likely meet a floor area ratio of 11:1 now being considered by the Planning Department. The present C-5 provisions prohibit residential buildings; these may be permitted as special uses (conditional uses) in the proposed revisions. Parking in the core area of downtown may be prohibited in these revisions.

New York, New York, Department of City Planning, January 3 and 4, 1966.

A full orientation to zoning in downtown New York was gained through two days of conferences held by the Department staff and the Resident Consultants with Mr. Jack Smith, who visited San Francisco as a special consultant for the Downtown Zoning Study. Mr. Smith was in charge of the major rezoning project which resulted in the adoption of New York's present ordinance in 1961, and until recently was the Chief of the Office of Master Planning in the New York Department of City Planning.

Among the major points brought out in these conferences was the fact that the standards in effect for downtown New York from 1916 until 1961, while not accomplishing desired results in terms of overall density of development, were nevertheless overconfining as to building form. The new regulations provided for a basic floor area ratio of 15:1 in the most intensively developed downtown areas, a reduction in the maximum bulk permitted, with a series of options permitting flexibility of form, and bonuses for plazas and arcades up to a maximum floor area ratio of 18:1. These plazas and arcades are considered very significant as a means of providing additional space for the pedestrian traffic generated by such intensive development. Because of the nature of the bonuses and certain light-angle provisions, the highest floor area ratios are achieved on large sites located on the wider streets. It is interesting to note that no purchase of zoning development rights from adjacent properties as a means of further increasing the size of a building is permitted in New York. The new ordinance also prescribes density and open space standards for downtown apartments, and requires parking for all apartment buildings, though often at less than a 1:1 ratio.

Contrary to the predictions of its opponents, the 1961 New York zoning ordinance has not caused a decrease in the annual rate of construction of either office buildings or apartments. Nor have large buildings been discouraged, as evidenced by structures recently completed or now being planned (at least two buildings would reach 100 stories). The unevenness of construction occasioned by the moratorium under which pre-1961 code standards remained in effect has now subsided. No real stereotypes of building design have resulted from the new standards, though both good and bad buildings have been erected. Quality of design is now, even more than under the pre-1961 ordinance, a function of the developer and his architect.

Chicago, Illinois, Department of Development and Planning, March 14 and 15, 1966.

There has long been a favorable climate for downtown planning in Chicago. Downtown leaders have supported measures to maintain the tightness of the core, and ordinance limits on the bulk of downtown buildings have existed since 1893. Chicago has now had ten years of experience with a basic 16:1 floor area ratio with bonuses for plazas, setbacks and arcades. These zoning provisions have been effective in preserving light and air and gaining additional pedestrian space; the bonuses have been used in new construction and have permitted flexibility of design. The 16:1 floor area ratio is economically feasible, despite the tightness of Chicago's downtown core, the high cost of foundation work, and the need in some cases to demolish older buildings of substantial size for new construction. The present zoning requirements have been in effect for most of the period of the current construction boom; Chicago is easily maintaining its second place position nationally in quantity of office space, and the building boom does not show signs of abating.

In this boom the continued life of some of Chicago's many significant older buildings is endangered; an Architectural Landmarks Commission exists, but this body has been unable to offer economic incentives for retention of the buildings it designates as significant.

Official city transportation policy has now turned its emphasis from freeways, since the basic system is completed, to improvement of public transit. At Chicago's size and density, all of the costs involved in providing further freeway access and parking facilities for the downtown area compare unfavorably with the costs of improving and expanding the established system of subway, train and bus transportation.

Minneapolis, Minnesota, Planning Commission, March 16 and 17, 1966.

The current zoning ordinance in Minneapolis was enacted in 1963 after several years of study and revision. This ordinance contains carefully worked out bonuses for bulk of buildings in the downtown area, designed to encourage plazas, arcades, sidewalk canopies and access to parking and loading. These bonuses have not been used, however, due to the high basic floor area ratio of 14:1 that is in effect, considerably higher than the Planning Commission's original proposal. New buildings are being constructed at less than 14:1, some in the established core and some in the Gateway Center redevelopment area adjacent to the core which is absorbing much of the city's needs for office, hotel and public facilities space. A considerable amount of land in the core and in adjacent areas is devoted to off-street parking in garages and lots, with little prospect of an increase in transit riding to stave off greater traffic congestion. At the same time, interest is high for improvement of pedestrian circulation. Pedestrian bridges over streets are establishing a second-level pedestrian network protected from the extremes of outdoor climate, and a mall will soon be created on the main shopping street of the city.

Denver, Colorado, Planning Office, March 18, 1966.

Denver has for 10 years had a floor area ratio limit of 10:1 for its downtown area. Amendments in 1961 retained the basic 10:1 floor area ratio but added bonuses for plazas, arcades and low height of certain portions of the building. Downtown interests have been active in the planning process, and favor the present level of controls. The core area has been kept compact, with distinct functional areas developing through

natural processes, and with three complexes of public buildings anchoring the boundaries of the core. These are the Civic Center which includes the City Hall and State Capitol, the Federal center which has been recently expanded with attractive buildings, and convention and cultural facilities now being added to as part of the Skyline redevelopment project. It is possible that the University of Denver will soon develop a 200-acre campus adjacent to downtown. In the future, the core area may be ringed by freeways and parking terminals, which are becoming more necessary with the present emphasis upon automobile travel. It is not considered practical to draw further traffic through the core itself, where streets are reaching capacity and pedestrian amenities are being emphasized.

Los Angeles, California

As one of the most rapidly expanding metropolitan centers in the country, Los Angeles has had extraordinary additions of commercial floor space since the Second World War. In the decade 1950-1960, however, the major growth was not in the central business district but outside it to the west. Since 1960 there has been growing recognition of the greater advantages of more central locations, where compactness contributes to easier business contacts, better planning for automobile access and public transit, an interplay of office employment with retailing, greater opportunity for pedestrian amenities and separation of pedestrian movement, and less costly provision of many public services. In the past several years there has been a return of development to the central business district, aided in part by construction of governmental, cultural and recreation facilities in the civic center, and in part by execution of the Bunker Hill redevelopment project with its combination of offices, apartments, hotels and parking.

Building bulk controls in Los Angeles have traditionally included height limits, and until recently even the highest-intensity districts were subject to a limit of 13 stories and 150 feet. Now a floor area ratio of 13:1 takes precedence in the downtown area, and buildings of considerable height have been built and projected under the floor area ratio formula. In recognition of the dependence of the Los Angeles area upon automobile travel, off-street parking requirements in the central area are high (although less than requirements for the remainder of the city): one parking space for each dwelling unit, and one space for each 1,000 square feet of floor space in office and retail buildings.

SUMMARY OF BULK PROVISIONS FOR DOWNTOWN COMMERCIAL BUILDINGS IN MAJOR CITIES

1966

SUMMARY OF BULK PROVISIONS FOR DOWNTOWN COMMERCIAL BUILDINGS IN MAJOR CITIES

CITY	ESTIMATED 1964 METROPOLITAN POPULATION (000)	DATE OF CURRENT DOWN-TOWN ZONING PROVISIONS	BASIC MAXIMUM FLOOR AREA RATIO	MANDATORY BUILDING FEATURES	FEATURES FOR WHICH FLOOR AREA BONUSES ARE GIVEN
New York	11,260	1963	15:1	(1) Initial setback at 85' or 6 stories. (2) Sky exposure plane. (3) 20' rear yard (with some exceptions).	(1) Plaza adjacent to or connected to street. (2) Open area connecting 2 plazas or a plaza and a street. (3) Arcade adjacent to a street or plaza.
Los Angeles	6,674	1955, rev. 1960	13:1		None
Chicago	6,591	1957	16:1 (inner area) 12:1 (outer area)		(1) Location adjacent to or opposite large public open space. (2) Setback of ground floor from front lot line (arcade). (3) Setback of upper floors from front lot line. (4) Setback of ground floor from other lot lines. (5) Setback of upper floors from other lot lines.

Summary of Bulk Provisions for Downtown Commercial Buildings in Major Cities - Continued

CITY	ESTIMATED 1964 METROPOLITAN POPULATION (000)	DATE OF CURRENT DOWN-TOWN ZONING PROVISIONS	BASIC MAXIMUM FLOOR AREA RATIO	MANDATORY BUILDING FEATURES	FEATURES FOR WHICH FLOOR AREA BONUSES ARE GIVEN
Philadelphia	4,617	1962	12:1		(1) Location adjacent to wide street. (2) Front setback. (3) Setback from rear lot line. (4) Street arcade. (5) Other open areas at ground level. (6) Setbacks above ground level no more than 40' in height.
Detroit	3,914	1966 (proposed)	None	(1) Maximum cubic size of building = lot area x width of widest abutting street x 2; plus towers with maximum horizontal dimension of 60' and setback 60' from all lot lines, covering up to 25% of lot.	None
Boston	3,177	1963	10:1 and 8:1	(1) Minimum setback from center line of street above second floor. (2) Minimum rear yard.	(1) Location adjacent to public open space or wide street. (2) Provision of off-street parking.
SAN FRANCISCO	2,894	1960, rev. 1964	16:1		(1) Location at street intersection. (2) Location on through lot.

Summary of Bulk Provisions for Downtown Commercial Buildings in Major Cities - Continued

CITY	ESTIMATED 1964 METROPOLITAN POPULATION (000)	DATE OF CURRENT DOWNTOWN ZONING PROVISIONS	BASIC MAXIMUM FLOOR AREA RATIO	MANDATORY BUILDING FEATURES	FEATURES FOR WHICH FLOOR AREA BONUSES ARE GIVEN
Pittsburgh	2,368	1958	None	(1) Height limit of 110' or 11 stories. (2) Minimum rear yard.	None
		1965 (proposed)	11:1		(1) Location adjacent to wide street. (2) Front setback. (3) Setback from rear lot line. (4) Street arcade. (5) Other open areas at ground level. (6) Setbacks above ground level no more than 40' in height. (7) Location adjacent to or opposite permanent open space.
District of Columbia	2,323	1958	8.5:1 (10.0:1 on streets 110' or more in width)	(1) Height limit of 110' (130' on streets 110' or more in width). (2) Minimum rear yard.	(1) Street arcade.
Baltimore	1,829	1962 (proposed)	8:1	(1) Initial setback at 70' or 6 stories. (2) Sky exposure plane. (3) Minimum rear yard.	(1) Plaza adjacent to or connected to street. (2) Street arcade, or internal arcade connecting streets, plazas or street arcades.

Summary of Bulk Provisions for Downtown Commercial Buildings in Major Cities - Continued

CITY	ESTIMATED 1964 METROPOLITAN POPULATION (000)	DATE OF CURRENT DOWN-TOWN ZONING PROVISIONS	BASIC MAXIMUM FLOOR AREA RATIO	MANDATORY BUILDING FEATURES	FEATURES FOR WHICH FLOOR AREA BONUSES ARE GIVEN
Toronto	1,824 (1961 cen.)	1959	12:1		None
Minneapolis	1,578	1963	14:1		(1) Location adjacent to or opposite large public open space. (2) Sidewalk canopy. (3) Street arcade. (4) Plaza adjacent to or connected to street. (5) Internal arcade connecting streets, street arcades or plazas. (6) Direct pedestrian connection to parking terminal located in special parking district. (7) Provision of common off-street freight loading facilities on a whole-block basis. (8) Off-street passenger loading (for hotels, motels and places of public assembly). (9) Provision of common off-street parking facilities on a whole-block basis. (Bonuses for features No. 8 and No. 9 not in effect in this district.)

(Nonuniform audio not in effect in this district.)

Summary of Bulk Provisions for Downtown Commercial Buildings in Major Cities - Continued

CITY	ESTIMATED 1964 METROPOLITAN POPULATION (000)	DATE OF CURRENT DOWNTOWN ZONING PROVISIONS	BASIC MAXIMUM FLOOR AREA RATIO	MANDATORY BUILDING FEATURES	FEATURES FOR WHICH FLOOR AREA BONUSES ARE GIVEN
Seattle	1,178	1965	10:1		(1) Plaza adjacent to or connected to street. (2) Arcade adjacent to a street or plaza. (3) Setback from street line above second floor.
Denver	1,082	1956, rev. 1961	10:1		(1) Plaza adjacent to or connected to street. (2) Arcade adjacent to street, or connecting streets or plazas. (3) Open area on site above 40' in height for a portion of the building. (4) Open area on site above 80' in height for a portion of the building.
Portland	876	1959	12:1		None
Vancouver, B.C.	790 (1961 cen.)	1957	None	(1) Height and setbacks based upon widths of abutting streets.	None
		1961 (proposed)	5:1		(1) Open volume up to 80' in height. (2) Plaza adjacent to or connected to streets. (3) Arcade adjacent to street.

II. DEVELOPMENT ECONOMICS

General Considerations

The objective of this portion of the Downtown Zoning Study was to set a framework for analysis and to obtain data on building development techniques and economic processes. This was necessary to anticipate some of the effects that the proposed changes in zoning standards may have upon building development in the downtown area of San Francisco.

The development economics study is divided into two main phases. The first phase is devoted to defining the relevant building development economic processes that would be of interest to zoning and gathering data on these processes by interviews with persons in construction, development, financing, design, rental and management. The interviews were supplemented by research, and the retention of special expert advice on development economics for work on the second phase. The second phase is the anticipating of the economic effects of possible zoning standards, and the testing of their effects on projected developments. A special economic consultant, Development Research Associates, has been retained in an advisory capacity for specific questions concerning development economics and to test effects of some of the bonus provisions being studied.

An important consideration in the study of downtown development economics is the diversity of requirements of different types of investors and users. The institutional character of certain types of investors or users and the special tax situations or corporate needs of these types of entities make the drawing of any general rules for investment in the downtown extremely difficult. Investment in new building developments or in remodeling of older buildings in downtown is, however, strongly constrained by prevailing space markets and rental rates, the availability of prime tenants, the availability and character of financing, construction costs and techniques, leasing arrangements, maintenance and operation costs, carrying charges and interim financing, availability of suitable sites including considerations of land assembly, character of existing improvements, and tax, interest and insurance considerations. Investors, brokers, lenders or developers are required to go through elaborate analyses of anticipated return from their investments and the various money flows that are involved in these investments.

The major type of investor analysis usually takes the form of a productivity analysis in which revenues are compared against expenses to produce projected cash flows and equity returns that could be expected from the development investment. Income estimates are made by attributing certain rentals to the development based upon lease commitments and current and expected market conditions, applying certain contingencies for vacancies and initial fill-up time. Estimates of costs for the development are based upon past experience and the character of the present investment. The major cost components are: land costs including assembly, acquisition and demolition; construction costs including site preparation, carrying charges during construction and rental program; fees; and operating and maintenance costs. Based upon the types of tenant commitments and lenders' policies, estimates are made of the types of financing available. The developer, considering alternatives of selling upon completion, holding for short or long term investment purposes, trading upon establishment of a rental pattern or using other techniques, must then evaluate

the above-mentioned analysis based upon tax effects, depreciation and needs and desires unique to him. The investor is therefore conditioned strongly by his own income and tax situation, the state of the market at present and its potentials, kinds and qualities of commitments that can be made on leases, lending policies, construction and maintenance,labor and other costs, the availability and price of land, and site locational considerations including the conditions that may be placed upon a site by zoning.

Land Values

Land value data representing the estimated value of land per square foot or, most commonly, reported sales of property including land and improvements per square foot of land area were gathered from several sources. The City Department of Real Estate files of verified property transactions, newspaper articles reporting sales of downtown properties, reported sales in economic consulting firms' files and data derived from a review of tax stamps on recent instruments on record at the County Recorder's Office were compiled. The property values in these data showed a variation from several dollars per square foot to values of up to $250 per square foot in the downtown area, the latter occuring in the financial core on or near Montgomery Street. In the retail area, property values exceeding $100 per square foot were not uncommon. West of the major office and retail areas, property values from $20 upwards to $100 per square foot occurred in the vicinity of Market Street and the Civic Center.

Among the other factors that enter into the land value considerations are the cost of assembling land and the costs of buying profitable properties. Assembly of parcels involves fees and costs of assembly and often assembly penalties. In some cases air rights over adjoining properties are secured to achieve certain desired development characteristics short of acquiring full interest in the property.

On certain parcels the improvements, because of depreciation and present leasing arrangements, yield well as interim investments. New developments replacing these improvements must provide more attractive prospects of return to discount the termination of the existing profitable enterprise.

Office Rentals and Occupancy

Rentals in the new large office buildings range from 55¢-75¢ per square foot per month, with premiums for top floors and rentals ranging up to $1.00 per square foot per month. In the older first-class office buildings rentals vary from 35¢-75¢ per square foot per month. Ground floor rentals range from those quoted above to $1.50-$2.00 per square foot per month excluding maintenance for office type uses. Retail leases on the ground floor are usually written on a percentage basis.

A major characteristic of the rental structure is the relative uniformity throughout the financial district. Also, rental rates have been increasing. The International Building offered space in 1962 at 55¢ to 65¢ per square foot and presently is offering at 65¢ to 72.5¢ per square foot. Hartford Building rates were 50¢ in 1964 and are currently averaging 70¢ per square foot.

Rental rates will vary from the general average depending on the size and character of the tenant, arrangements on partitioning or finishing space, and the location of these buildings away from traditional prestige areas.

Levels of occupancy in new buildings in downtown San Francisco, recently examined by Development Research Associates, are remarkably high. The high occupancy can be attributed to major tenants being headquarters uses. In nine buildings surveyed 74 per cent of total space was occupied by major tenants. Present plans for buildings under construction or being planned show only 42 per cent of new space represented by major tenants or owners. Large existing headquarters offices are shown on Map No. 10 in the Appendix to this paper.

Construction Costs

Construction costs for large apartment and office buildings range from $18 for the smaller (wood-frame) multi-family apartments to $24 in the larger (steel-frame) apartments and office buildings and in excess of $35 in the highest quality office buildings.

Typical construction costs are - Type 1A (fire resistive-steel frame) buildings, $24 to $32 per square foot; Type 1B (fire resistive-concrete frame) buildings, $26 per square foot; Type 2 (fire resistive) buildings, $21 to $24 per square foot; Type 3 (masonry) buildings, $19 to $21 per square foot.

Site preparation costs vary considerably between the area west of Montgomery Street and the area east of Montgomery Street where soil conditions are poor. Map No. 3 indicates the original shoreline near Montgomery Street and area of present fill. Site preparation work in the area east of Montgomery Street can amount to per square foot of lot area costs of up to $8.00 or more. Plaza construction ranges from $5 to $10 per square foot. Costs of major garages have ranged from $1,873 per self-parking stall for the current Fifth and Mission Garage expansion to $4,716 per space for the Civic Center Garage. Studies in the Yerba Buena Project predict costs range between approximately $2,625 per stall for above-ground parking structures and $4,200 per stall for subterranean structures.

Maintenance and Operation

Maintenance and operation costs for office buildings vary from $1.50 to $2.50 per square foot per year. These figures include maintenance and operating costs such as heating, lighting, cleaning, supervision and administration.

In the latest Office Building Exchange published by the National Association of Building Owners and Managers, representing 1964 data for San Francisco, total operating and maintenance costs per square foot for office space were $3.28. This figure represents two categories of costs. They are general operating costs representing approximately $1.71, alterations, maintenance and decorating costs representing approximately 22¢, for a total of $1.93 for office space for general operating and maintenance costs.

Office Building Efficiency and Design

Modern building design and construction technology have resulted in greater freedom of design opportunities. The precise control now available in modern buildings for light, heat, communication and other environmental factors and the diversity of form offered by structural techniques afford a wide flexibility of size and shape of buildings. Building designers, however, are subject to economic factors which weigh strongly in the design, shape and efficiency in office buildings. The increasing complexities and completeness of building appurtenances and equipment result in higher costs and a need to economize and produce the most highly efficient building types.

The most prevalent design goal is to produce a building approaching or exceeding 80% efficiency, that is, 80 per cent of net rentable office area in relation to total gross square footage of structure. Development Research Associates examined twenty-one recently constructed office buildings in downtown San Francisco and efficiencies ranged from a low of about 60 per cent in the new Matson Building to in excess of 85 per cent in the new Hong Kong Bank and Bank of California Buildings.

In general, the square shaped floor plan is most efficient in the relationship of outside wall area to square footage. The rectangular shape is also efficient and variations on these shapes in the form of an L shape or cross shape floor plan are widely used as is a rectangular or square tower with an attached service element. Design modules of 4'6" to 5'6" are widely used as these produce workable office areas and structurally efficient column spacings.

A rule of thumb for minimum gross floor area per floor in office buildings is 10,000 square feet, and certain large firms require 20,000 to 30,000 square feet per floor. Some recent large buildings have been built with up to 40,000 square feet per floor.

The square footage per floor and number of floors have to be balanced against elevator service considerations. Design objectives for office elevator service usually involve service with a 30-second turnaround and waiting time service. Capacities are designed to allow the morning peak load to be distributed to an office building in a total of 35 minutes. Elevators cost approximately $25,000 to $200,000 each depending on the type of machinery. A bank of elevators containing six elevators is considered desirable. A rule of thumb is that one elevator can serve 250 persons according to the highest standard of service. The critical elevator design problem is choosing a minimum number of elevators to carry a predetermined percentage of the building population in a five-minute period with minimum waiting time.

The relation of floor space to outside wall area is a critical consideration in the efficiency of an office building. A modern office building design usually places offices on the perimeter with internal reception and secretary space or internal offices. Air conditioning is considered essential in modern office buildings for comfort and in compensating for heat generated by lighting standards of up to 100 to 120 foot candles, and a great range of office equipment.

In residential structures, FHA requirements are a minimum of three elevators over 21 stories and a change to a high speed type of elevator. The most popular heights have been 16 to 25 stories for apartment buildings. FHA

experience is that apartment buildings jump from 3 to 12 stories with the change from wood frame construction to fire resistive construction.

The Building Code introduces significant building type height and cost breaks. Type 1A buildings with structural steel frames are unlimited in height and size. Type 1B buildings with reinforced concrete frames are limited to 13 stories or 160 feet in height. Type 2 buildings have a nine-story or 95-foot maximum with 18,000 square feet per floor maximum floor area. Type 3 buildings have a six-story or 65-foot maximum with 12,000 square feet per floor maximum. Construction cost differences between Type 1A and 1B buildings represent approximately $4 to $7 per square foot.

In a recent study, a Texas architectural firm indicated the following construction cost factors varying with height of building:

a. frame costs rise slightly per square foot as floors are added.
b. mechanical costs rise slightly with height.
c. elevator total costs rise rapidly as additional floors are added.
d. indirect costs and costs of equipment and management for the contractor rise considerably with increased height.

Remodeling

Remodeling of an existing building is dependent upon the type and character of the building and its proposed use and the desires of the owner to continue the life of the property. A primary consideration in remodeling is a review of the structure of the existing building for compliance with present day seismic codes and live loadings. Other factors are the suitability of the building to meet modern service standards, to have space flexibility and to comply with mechanical and electrical codes. The number of elevators in the existing building, the presence of vertical shafts, the kind of electrical service available and the present heating system must be evaluated for conversion into modern air conditioning, lighting and electrical standards, telephone service and full traffic programming for elevators. In some cases, exit and egress code requirements must be met by rebuilding or providing new facilities.

Remodeling costs can run from $10 to $12 per square foot although in many cases they have gone as high as $30 to $40 per square foot for special circumstances. Remodeling to change use or space can change depreciation schedules and thus produce certain benefits to building owners. Other special advantages of remodeling are the savings in total time required to provide new space and partial occupancy during reconstruction work. Provision of parking spaces through remodeling is extremely difficult. In old buildings major structural change may cause redistribution of loads with unpredictable new stress patterns. The general rule is to minimize the structural changes in older buildings.

A special factor now inducing remodeling conversions are Building Code requirements for smoke-proof towers in residential occupancies. Accordingly, old hotels of Type 3 construction are being converted to office buildings along Market and south of Market Street as office building requirements are less restrictive.

An additional Building Code factor to be considered is the requirement that if more than 30 per cent of the number of floors of a building structure is included in substantial alteration work, or if the floor loading is increased or changed in use to a more hazardous or higher occupant load use, the State seismic code must then be complied with for the entire structure.

Testing Zoning Standards

A major aspect of the development economics study is to project building developments on actual sites in downtown San Francisco in relation to possible new zoning standards. In particular, this testing process is being used to gauge the potential effect of some of the bonus provisions being studied. The attractiveness of these bonus provisions in relation to the types of benefits that may be derived by the developer are being considered by the economic consultant. In addition, the potential economic impacts of other zoning standards are being studied before final recommendations are put forth.

III. URBAN DESIGN ASPECTS

This section is concerned with aspects of the downtown area which are highly important, complex and sometimes indefinable. These aspects are referred to variously in terms of appearance, amenities, physical relationships, visual aspects, form, or aesthetic qualities. They make up the total physical expression of spaces, structures and activities in the downtown area, and are simplified here to the term "urban design aspects".

The primary purpose of the studies of urban design aspects and their description in this section is to relate these aspects to zoning. It must be recognized that zoning, while concrete in its application, has only a limited positive influence upon urban design, and that there are many other influences.

In order to put zoning conclusions in perspective, the discussion which follows gives broad coverage to urban design considerations in the downtown area. This discussion must not be thought of as proposing an overall design plan for downtown or for other portions of the city, although a partial framework for such a plan might be derived from this paper.

Opportunities for public implementation of design plans in American cities are now broadening. At the same time present opportunities, though limited, are still underused. These present opportunities are chiefly through zoning, public improvements, urban renewal, and in specialized cases the preservation of existing buildings through landmarks legislation.

The paucity of present implementation devices does not, of course, restrict the amount of analysis of urban design aspects that can be made. The Downtown Zoning Study has built upon previous design studies through a number of methods, some of which are described in Working Paper No. 1. Downtown urban design attributes have been identified through field study, photographs, sketches, diagrams, maps and models, and these attributes have been analyzed in terms of the effects zoning may have upon them. Various expressions of downtown design goals have been reviewed, in an effort to organize them into a rational order. Past, present and future city programs have been consulted. Consideration has been given to advances made in other cities in design programs and recent construction, and to typical and evolving building forms. In addition, existing San Francisco City Planning Code standards have been tested as to the results they can produce, and possible future standards are being tested as they are developed in this study.

The purpose of all this work is to determine the nature of existing downtown design attributes, the development forces that are at work, the changing relationships that result, and the opportunities and alternatives available for zoning.

What follows in this Working Paper No. 2 is an organized inventory of urban design attributes or "design resources" in the downtown area, with an indication of those attributes which are most susceptible to being affected through zoning.

Design attributes may be influenced by zoning in three somewhat different ways: (1) protection or preservation of existing attributes; (2) improvement or enhancement of existing attributes; or (3) introduction of new design attributes. It is in the latter two ways that zoning can make its most positive contributions.

The inventory which follows subdivides downtown design attributes into many small components for purposes of analysis. These components are rarely sensed singly by the observer, and it is often the many interrelationships of design components that make downtown exciting. In order to orient the reader at the outset to the total scope of this discussion, the inventory is given first in outline and then in expanded form.

A. SKYLINE

1. Appearance of downtown from a distance (views from without).
2. Entranceway appearance.
3. Overall form.
4. Relationship to function.

B. VIEWS

1. General advantages of views.
2. What is viewed.
3. Significant viewpoints.
4. Configuration of foreground buildings.

C. DETERMINANTS OF CHARACTER OF CERTAIN AREAS

1. A sense of identity of specific areas.
2. Relationship to functional areas.
3. Relationship to circulation systems.
4. Relationship to natural forms.
5. Effects of man-made physical forms upon open space enclosure, light and air penetration and the visual aspect of streets and squares.

    a. Width of street and height of buildings.
    b. Openness versus continuity of building masses along the street.
    c. Uniformity of front building line (facade line).
    d. The concept of sky exposure planes.
    e. Uniformity of cornice height.
    f. Harmony of building function.
    g. Features within the street.

6. Vistas and end points.
7. Uniformity versus variety.
8. Size and location of developed sites.
9. Areas of pronounced underdevelopment.
10. Blighting features.
11. Specific areas of pronounced historical or architectural character.

D. AREAS AFFECTED BY SPECIFIC PROGRAMS

1. Market Street.
2. Other areas.

E. SPECIFIC EXISTING BUILDINGS

F. PUBLIC OPEN SPACES

G. PEDESTRIAN MOVEMENT AND OTHER AMENITIES FOR PEDESTRIANS

1. Sidewalk widths.
2. Ease of access to buildings.
3. Through passageways.
4. Movement from one functional area to another, and across Market Street.
5. Freedom from conflict with motor vehicles in streets.
6. Freedom from sidewalk hazards.
7. Continuity of pedestrian interest.
8. Resting places.
9. Sunlight to streets and other open spaces.
10. Circulation of air.
11. Protection from rain.
12. Human scale.
13. Landscaping.
14. Avoidance or screening of unsightly or blighting influences.

H. AMENITIES FOR PERSONS IN VEHICLES

I. AMENITIES FOR BUILDING OCCUPANTS

1. Efficiency of building design.
2. Daylight.
3. Views.
4. Mixed-use buildings.
5. Existence of nearby convenience facilities.

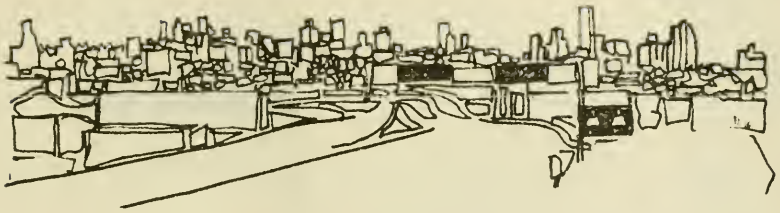

Figure 1: Entranceway from the South

A. SKYLINE

1. Appearance of downtown from a distance (views from without). The skyline, which consists of natural topography plus buildings and other man-made features, has a distinctive appearance from viewpoints outside of as well as within downtown. Fixed outside viewpoints include a number of the hills elsewhere in San Francisco, especially Telegraph, Russian, Potrero and Twin Peaks, as well as points across the Bay to the east and north. The skyline is unquestionably distinctive, and can be enhanced by further development of buildings.

2. Entranceway appearance. This is largely a "kinetic" experience, gained by movement in vehicles. The most spectacular entranceways are on elevated freeways: the Bay Bridge, the Bayshore Freeway as it rounds Potrero Hill, the Central Freeway curving behind the Civic Center, and the Embarcadero Freeway next to the Golden Gateway. Of no less significance are the more intimate ground level entrances, on Market Street, the numbered streets south of Market, streets from the west such as Bush, and streets from the north such as Columbus and Stockton. These entrance experiences are made impressive by the massiveness of the skyline, but often detracted from by the shabbiness and underdevelopment of areas near at hand. In improving these conditions zoning can play some part in stimulating development, but the best possibilities for improvement are through other, more direct programs.

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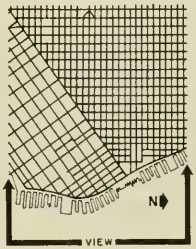
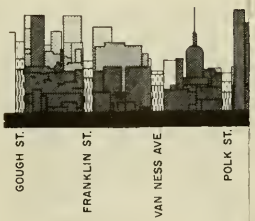
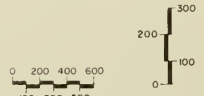
C-3 AND ADJACENT DISTRICTS

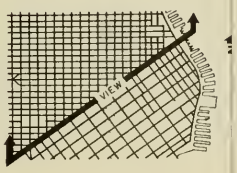


SKYLINE





EXPLANATORY NOTE VERTICAL SCALE IS TWICE HORIZONTAL. THESE SKYLINES ARE COMPOSITES OF SECTIONS DRAWN THROUGH STREETS WITH NO PERSPECTIVE USED DEPTH IS INDICATED ONLY BY DIFFERENCES IN TONE.



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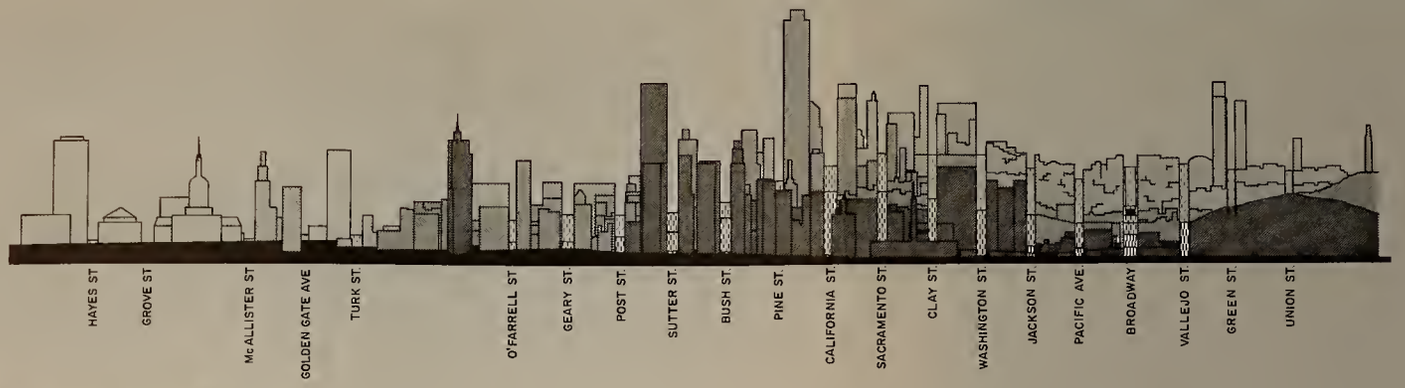
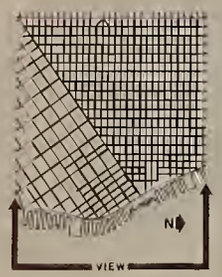


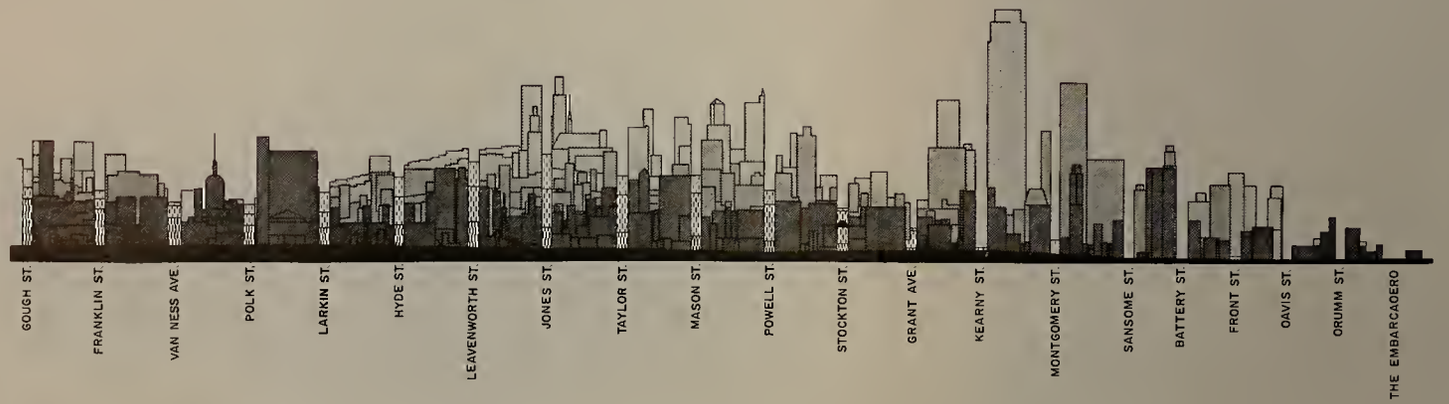


SKYLINE FROM EAST

DEPTH INDEX

- EMBARCADERO – MONTGOMERY
- MONTGOMERY – POWELL
- POWELL – HYDE
- HYDE – FRANKLIN

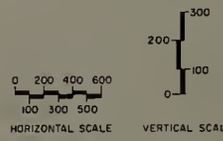
SKYLINE



SKYLINE FROM SOUTH

DEPTH INDEX

- MARKET – GEARY
- GEARY – PINE
- PINE – WASHINGTON
- WASHINGTON – VALLEJO



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3. Overall form. In recent years the downtown skyline has continued past trends, reaching its greatest mass in the heart of the Financial-Administrative District, but with significant clusterings along Market Street and on Nob Hill. Such clusterings, separated from one another by lower buildings, are significant to the image of the downtown area.

4. Relationship to function. The overall form of the skyline has greater significance when related to what is going on on the ground. The clusterings of tall buildings and the areas of lower ones reflect the functional area pattern which is characteristic of downtown San Francisco. This is the crux of the matter: if the functional area pattern is strengthened the skyline will continue to be reinforced and will become more spectacular. Thus indirectly, but usually only indirectly, will zoning have an effect upon the skyline.

B. VIEWS

1. General advantages of views. What are referred to here are views from inside downtown, either from topographic vantage points or from within buildings. These views have demonstrated psychological and economic advantages, in terms of pleasant living and working environments and prestige. In addition, if a certain openness around a building site can be maintained, there is an opportunity for high density of development on that site without ill effects for the building or its surroundings.

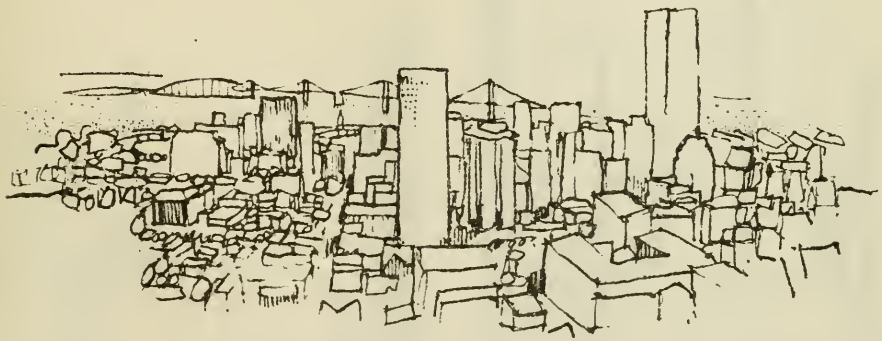


Figure 2: View from Nob Hill

2. What is viewed. From viewpoints within the downtown area, one of the most important prospects is of downtown itself, particularly of the skyline of large buildings in the Financial-Administrative District and on Nob Hill. Also important are views of the Bay, its islands, its bridges and its far shores in the East Bay and Marin, and views of hills and residential areas in San Francisco to the north, west and south.

3. Significant viewpoints. Among the viewpoints at ground level, the most notable are on the highest ground in the downtown, Nob Hill. Viewpoints within buildings are, of course, available wherever tall apartments, hotels and offices are constructed, although building viewpoints have thus far tended to be used to best advantage on Nob Hill. Tall building viewpoints are becoming more widespread, and they can afford the greatest advantages if they are made available to the general public rather than merely to building occupants and private associations.

4. Configuration of foreground buildings. Views from high ground, or from buildings at any location, are subject to being blocked by other tall buildings. In many respects such blocking is unavoidable. In some ways, however, either total or partial view protection can be provided. Encouragement can be given to slender towers instead of slab buildings, which have a greater blocking effect. The towers can be encouraged to be spaced in their locations, leaving visual corridors past them from other viewpoints. And finally, in specific and limited areas, reasonable height limit blankets can be established to prevent buildings from reaching extreme heights at critical locations. This last device would be most appropriate on the east slope of Nob Hill.

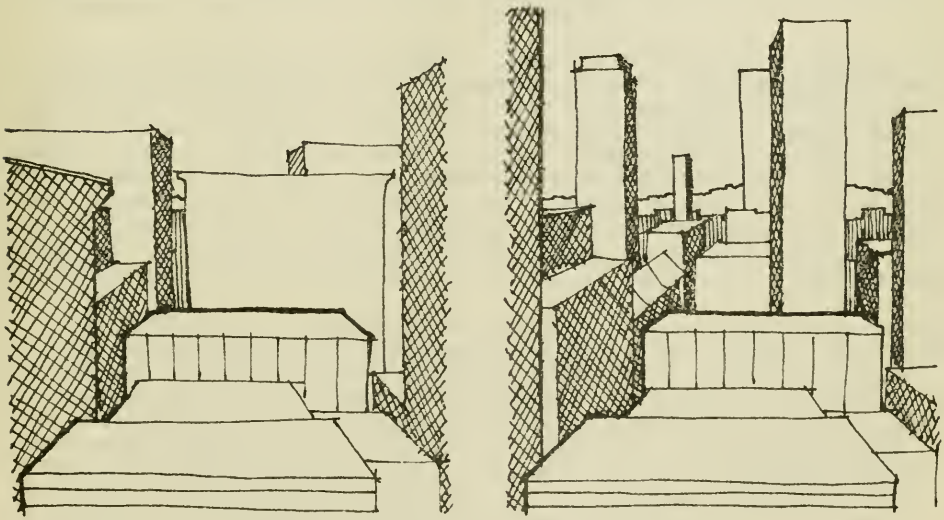


Figure 3: Slab Buildings versus Slender Towers

C. DETERMINANTS OF CHARACTER OF CERTAIN AREAS

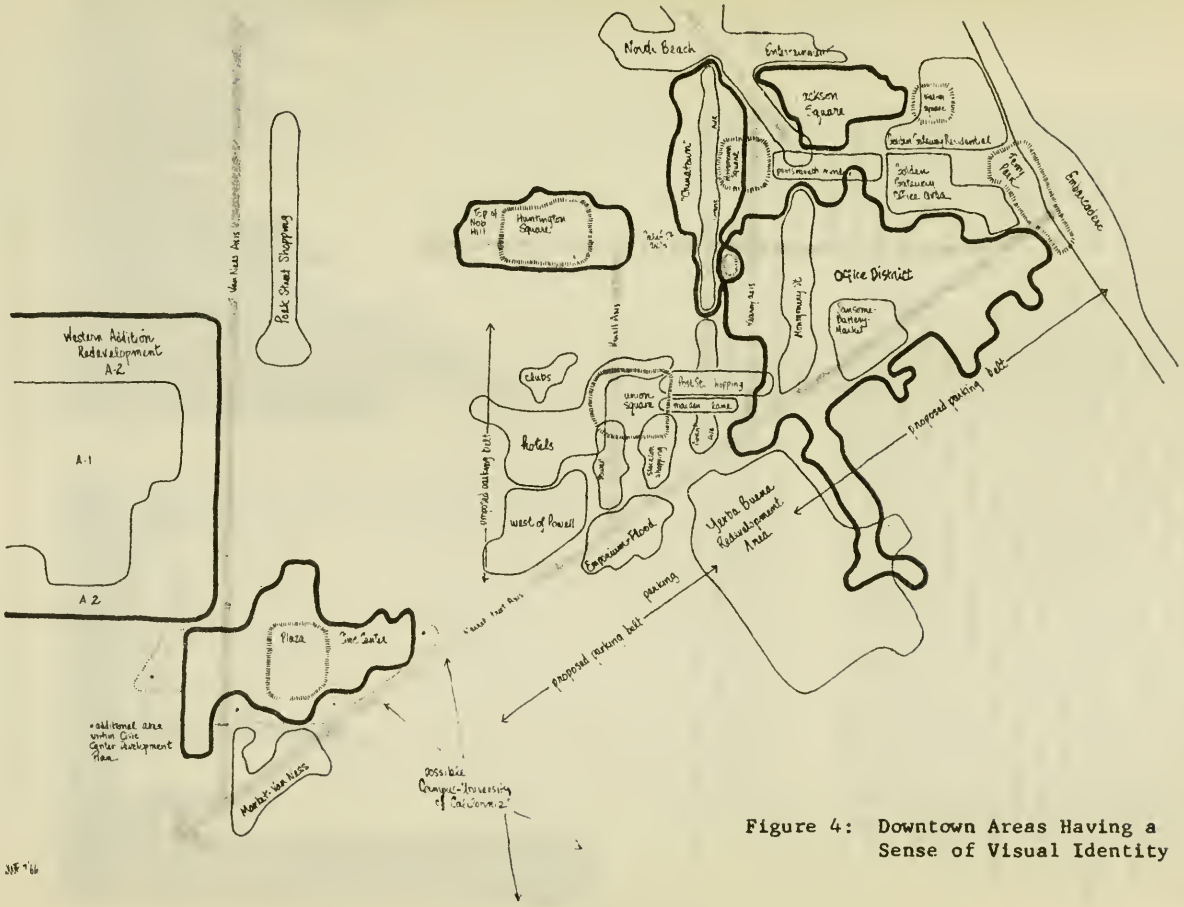
1. A sense of identity of specific areas. To a certain extent in all cities, but often in a pronounced manner in San Francisco, there are certain easily-described areas with a specific atmosphere, visual impact or sense of place. These areas, to be referred to here as "neighborhoods", vary in their degree of significance, but all serve to orient people and to help them to perceive downtown as a series of sections rather than as a total mass.

2. Relationship to functional areas. The "neighborhoods" correspond in some respects to the functional areas described elsewhere in the Downtown Zoning Study. (See Map No. 4 in the Appendix.) However, they usually represent a finer breakdown than the functional areas and often have a character best expressed in individual streets, intersections and squares. Because of the fineness of this breakdown, zoning will sometimes be too coarse a method to have a close effect upon the individual elements which make up the notable atmosphere and visual identity associated with these areas.

3. Relationship to circulation systems. One of the chief attributes of the "neighborhoods" is their capacity to provide people with identifying characteristics along paths through the "neighborhood" areas and between them. This movement, which enables the functional areas of downtown to interact, is currently inhibited in many ways by the existing street pattern. However, relatively easy transitions are available between the Financial-Administrative and Retail Districts across Kearny Street, between the Retail and Hotel-Entertainment Districts across Union Square, and between the core areas and Chinatown and North Beach, with promise of future improvements in Market Street to change that street from a barrier to a line of transition. To the extent that zoning can improve downtown circulation, it can enhance the movement between functional areas and "neighborhoods".

4. Relationship to natural forms. The limits of intensive downtown development have been set by the Bay and the steeply sloping hillsides. (See Map No. 3 in the Appendix.) Breakaways from these confining influences are possible in part along the waterfront east of Telegraph Hill, through the Columbus Avenue corridor, westward where the slope of Nob Hill recedes in the vicinity of Post Street, and southward below Market Street. At some of these locations, other conditions present obstacles to expansion of the core, and of course the downtown core itself is a holding force which discourages dispersal. The natural forms which have influenced the growth of downtown at the same time help to determine the nature and extent of its "neighborhoods".

5. Effects of man-made physical forms upon open space enclosure, light and air penetration and the visual aspect of streets and squares. The shapes of buildings and the manner in which they relate to one another and to the spaces between them are the main determinants of the character of urban design and of the individual downtown "neighborhoods". The extreme variations that occur between areas may be recognized in a comparison of Montgomery Street with the canyon-like effects of its tall buildings, the retail area to the west with its lower building frontages, and the evolving development eastward toward the Bay with its more openly spaced towers. Such variations between areas are natural, interesting, and worth preserving.


North Beach
Office District
Western Addition Redevelopment A-2
A-1
A-2
Park Street Shopping
Huntington Square
clubs
hotels
union Square
west of Powell
Yerba Buena Redevelopment Area
proposed parking belt
proposed parking belt - parking
Plaza
Market-Van Ness
possible Crossing of California
Embarcadero
Montgomery
Kearny
Powell
Stockton
Grant
Maiden Lane
Transbay Terminal
Golden Gateway Office Area
Jackson Square
Jackson Playground
Portsmouth Square
Chinatown
Transamerica Pyramid
Bank of America
Crocker Bank
Wells Fargo Bank
Hilton
Mark Hopkins
Fairmont
Stanford Court
Nob Hill
Russian Hill
Telegraph Hill
Van Ness Ave
Columbus
Pacific
Broadway
Sacramento
California
Pine
Bush
Sutter
Post
Geary
O'Farrell
Ellis
Eddy
Turk
Golden Gate
Fulton
Hayes
Grove
Market
Mission
Howard
Folsom
Harrison
Bryant
Brannan
Townsend
Embarcadero Freeway
Bay Bridge
Ferry Building
Pier 7
Pier 9
Pier 15
Pier 19
Pier 23
Pier 27
Pier 31
Pier 35
Pier 39
Pier 43
Pier 45
Pier 47
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Pier

Various factors bearing upon the complex relationships among buildings and open spaces are the following:

a. Width of street and height of buildings. Since a sense of enclosure is determined by the relationship between the size of an open space and the height of buildings along it, variations in the ratio of street width to building height will affect the visual qualities of the street. The degree of penetration of light and air will also be affected by this relationship. Independent studies have indicated that since normal forward vision is limited to about 30 degrees above the horizontal, buildings reaching an elevation of 30 degrees in the frontal view of the observer on a street or in a square produce a sense of near full enclosure, while buildings reaching an elevation of 45 degrees give a sense of full enclosure. Once enclosure is achieved, building height may continue to increase within a certain range without further affecting the impression upon the observer in the street below; at some point, however, further height will introduce other factors, such as a substantial interference with light and air penetration or an oppressiveness produced by the total scale of development.

b. Openness versus continuity of building masses along the street. In newer large-scale urban developments, such as the Golden Gateway, the open spaces between buildings placed along the streets permit the penetration of light and air. The same can

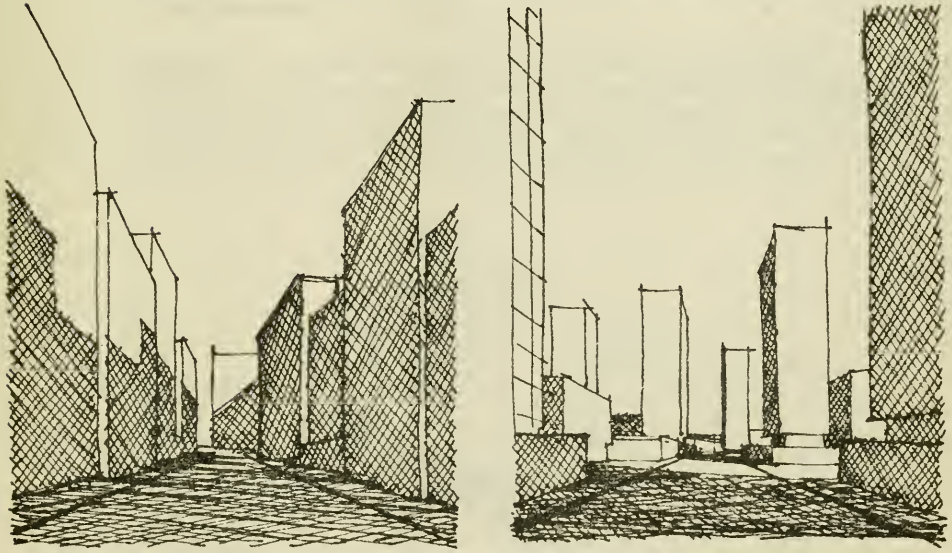


Figure 5: Contrasting Relationships among Buildings and Open Spaces

be achieved in older areas by the provision of side setbacks for new buildings. In such cases the amount of side setback should be carefully considered, since it is critical to the sense of enclosure and unity of the street.

c. Uniformity of front building line (facade line). Another determinant of general street form is the degree, if any, to which the front wall of the building is set back from the front property line, both at the ground level and at upper levels. A front setback or lack of it can be as much a determinant of enclosure as street width, and in some cases a broad new setback can destroy the feeling of enclosure for a major portion of a street. As for penetration of light and air to streets, front setbacks tend to have less of an effect than side setbacks.

d. The concept of sky exposure planes. Some other cities have enforced light and air penetration requirements through establishing in their zoning ordinances an imaginary slanting plane rising from the center of the street or from a certain level above the front property line, through which buildings are not permitted to penetrate except in the form of towers which do not exceed certain dimensions.

e. Uniformity of cornice height. This concept, widely used to create unity in earlier grand designs for cities, is less often used today, since the cornice is not often a major element in modern architecture. Zoning ordinances have sometimes accomplished the same general result by use of sky exposure planes where the height of front building walls is critical to the character of a street.

f. Harmony of building function. This is one of the greatest unifying forces in "neighborhoods". The predominant function of the buildings in an area, and the form taken by the buildings as a consequence of this function, as in the retail and office core areas, help to establish the atmosphere of the area.

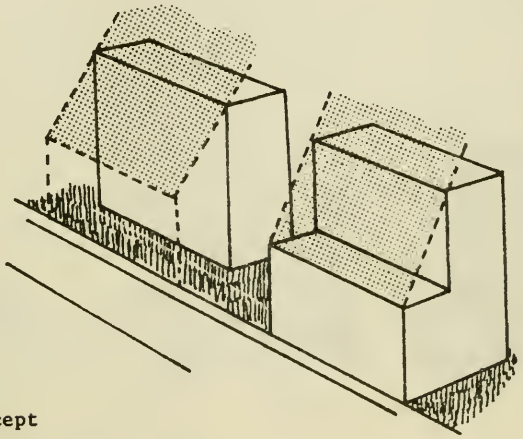


Figure 6:

Sky Exposure Plane Concept

g. Features within the street. This is a factor not within the scope of zoning, but highly significant to the unity of "neighborhoods". Such features include types of paving materials, lamp-posts, street signs, utility fixtures, planting and kiosks, designed and arranged to produce or complement a particular area character.

It can be seen from the above list that zoning provisions, except within the street itself, can have a strong effect upon the character of "neighborhoods" in terms of the relationships among buildings and open spaces. Such provisions can also have other effects upon man-made physical forms, as further outlined below.

6. Vistas and end points. The channelized view forming a vista may terminate at some end point which has significance as a boundary of a "neighborhood" or an introduction to a different "neighborhood". Some of the most notable end points are the Ferry Building as seen down Market and Commercial Streets, Coit Tower as seen along Kearny Street, and those buildings on Market Street which mark the termination of streets both north and south of Market. Of these, the end points most subject to further enhancement are those on Market Street.

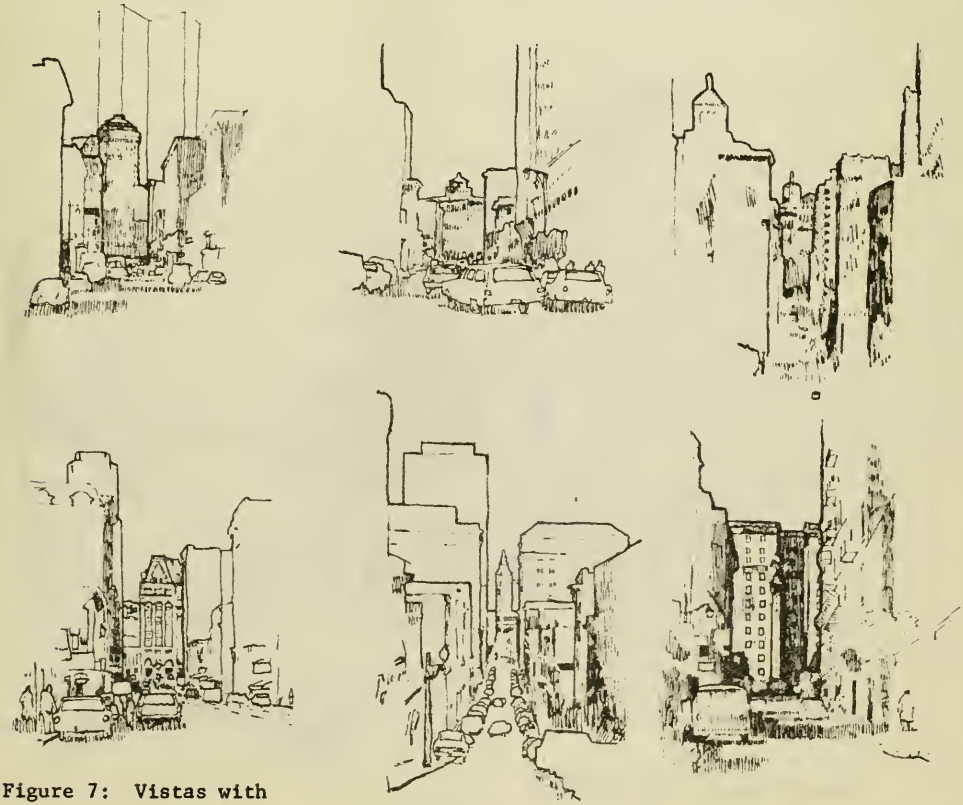


Figure 7: Vistas with Pronounced End Points

7. Uniformity versus variety. These terms point up what is often a delicate balance in urban design. If uniformity becomes monotony it is thought undesirable, and the same is true of variety if it produces disorder and confusion. If zoning standards are to be measured in design as well as in economic terms, they must strike a balance between restriction and flexibility.

8. Size and location of developed sites. Other things being equal, a larger site gives more freedom to the designer and opportunities to the developer than a smaller site. From a design point of view, therefore, larger sites may be favored. At the same time, the outward effect of development on a larger site will be greater, and therefore the larger sites may have a greater significance to urban design. Location of a site at a street intersection, in providing greater openness to streets, also gives greater design freedom, and it does not appear that such freedom is consistent with the present 25 per cent floor area bonus for corner lots contained in the San Francisco City Planning Code.

9. Areas of pronounced underdevelopment. A lack of physical development or vitality can characterize an area as much as does more intensive development. San Francisco is fortunate in having less of an underdeveloped "fringe" in its downtown area than many other cities, but seriously depressed

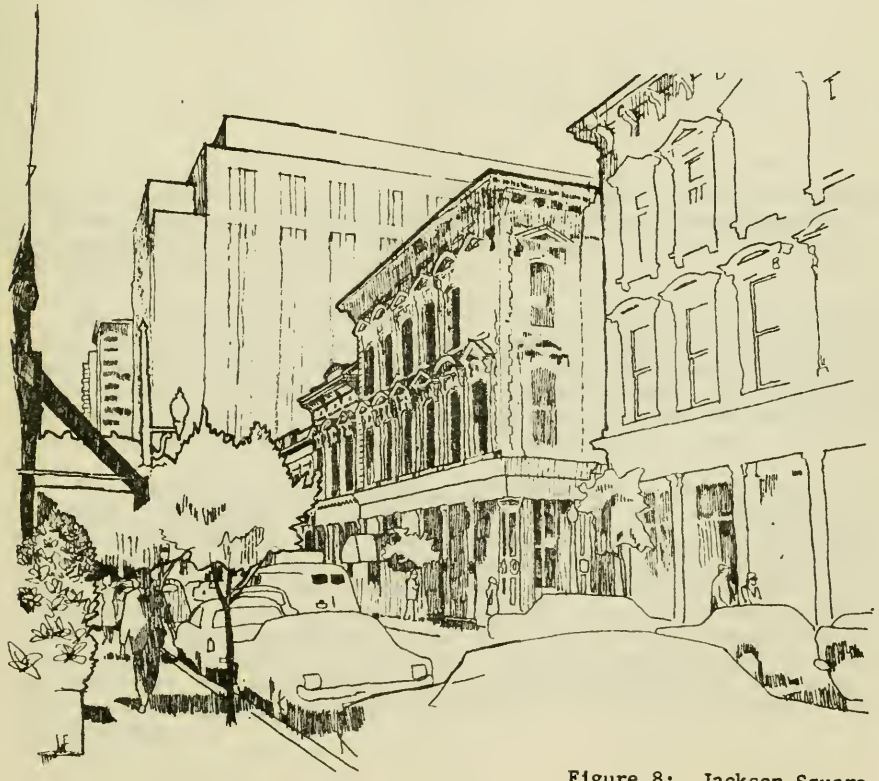


Figure 8: Jackson Square

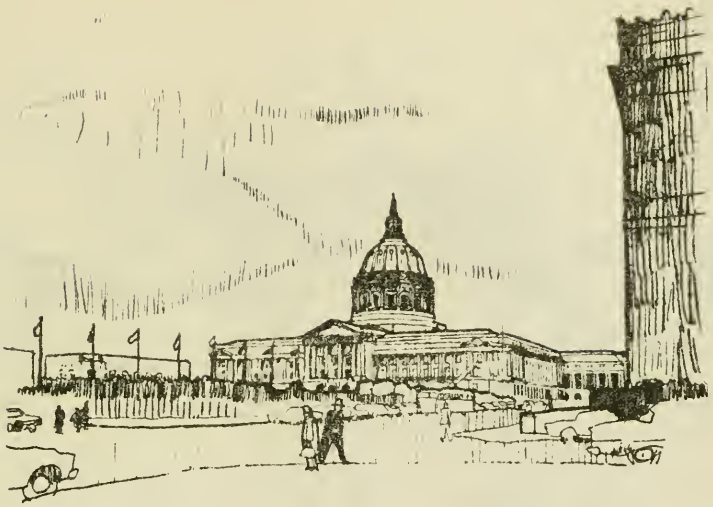


Figure 9: The Civic Center

areas do exist in the South of Market and to a lesser extent along parts of Market Street and in the Midtown Residential area. Improvement in the appearance of the total downtown is dependent upon the spreading of new development into all of these areas.

10. Blighting features. Even in some of the most active downtown areas, certain features detract sharply from good design. Significant among these are exposed side building walls, unscreened parking lots and misplaced and proliferated signs and billboards. These unfortunate visual intrusions often detract from the appearance of downtown far out of proportion to whatever community values may be claimed for them.

11. Specific areas of pronounced historical or architectural character. Four areas in downtown San Francisco, on an area basis, have an outstanding quality produced by groupings of buildings of historical or architectural interest. These are Jackson Square, the Civic Center, Chinatown (mainly on Grant Avenue), and the top of Nob Hill. In each of these, maintenance of the prevailing low mass of buildings and preservation of many existing structures are critical, as these elements could be rapidly and permanently destroyed. Preventive actions through zoning are indicated, and currently the only protection afforded is by height limits in the Jackson Square and Civic Center areas. (See Map No. 2 in the Appendix.)

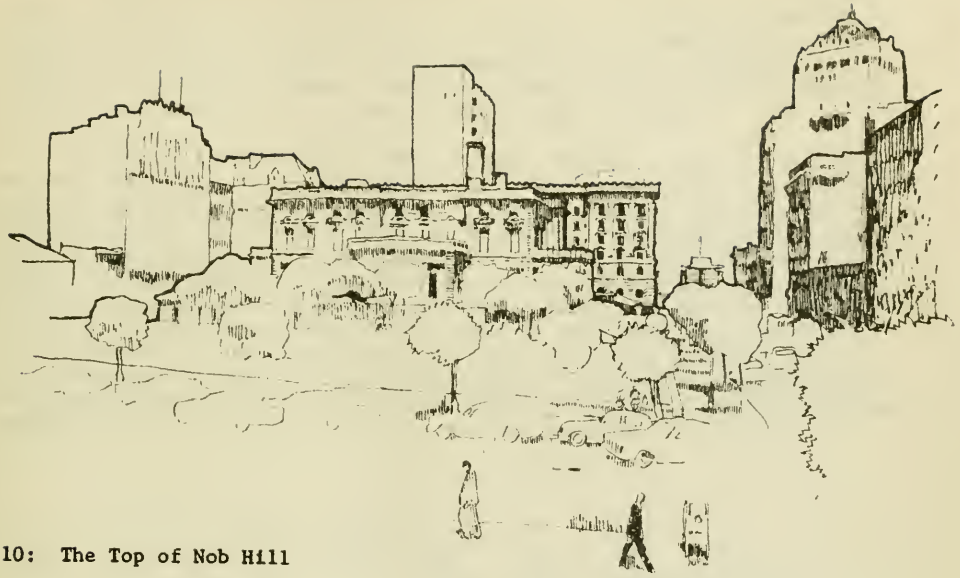


Figure 10: The Top of Nob Hill

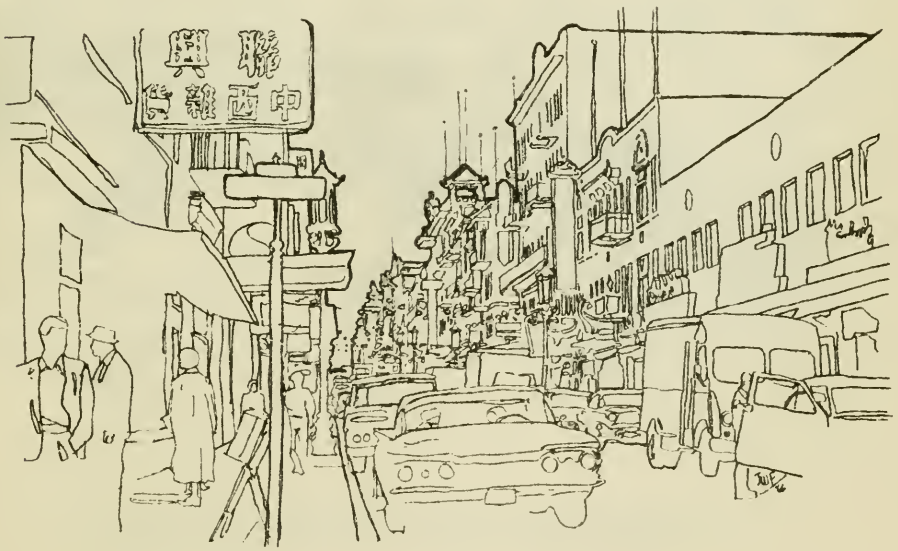


Figure 11: Grant Avenue

D. AREAS AFFECTED BY SPECIFIC PROGRAMS

1. Market Street. The realization of rapid transit in San Francisco offers an unmatched opportunity for the improvement of Market Street to bring it closer to its full potentials. Design can be improved with reconstruction of the street itself, development of adjacent properties, and creation of new public plazas. Zoning on Market Street can complement the efforts being made by public agencies and private developers.

The concept of the overall form of Market Street is one of strengthening and filling out the Market Street spine with new development, with the greatest emphasis around the new rapid transit stations. This concept indicates that Market Street should be favored in the zoning ordinance in terms of the intensity of development permitted, with the greatest encouragement to high densities in the station areas. At the same time, Market Street traverses several different functional areas, so that the type and intensity of development that occurs should in each case be commensurate with the nature of the functional area. High densities on Market Street will recognize the great width of this street, the ready accessibility of properties along the street from rapid transit, and the strong economic and design effect that Market Street has upon the remainder of downtown.

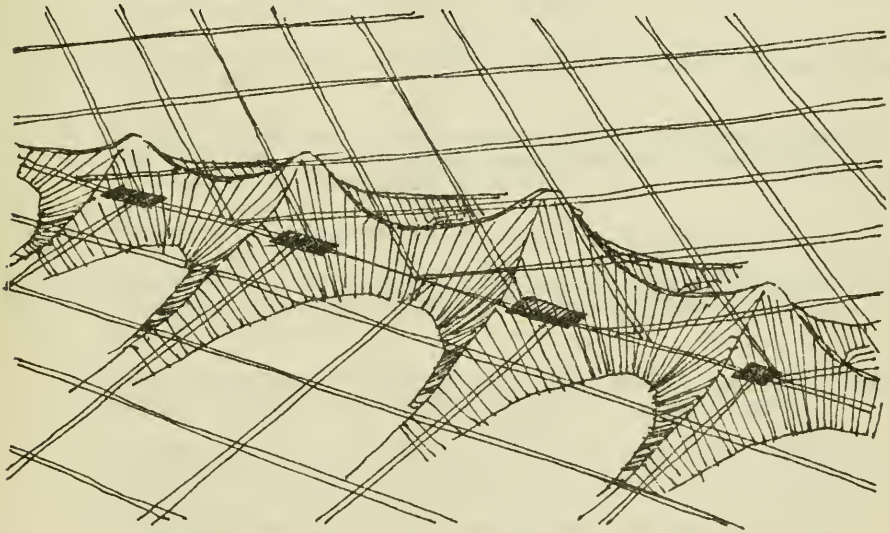
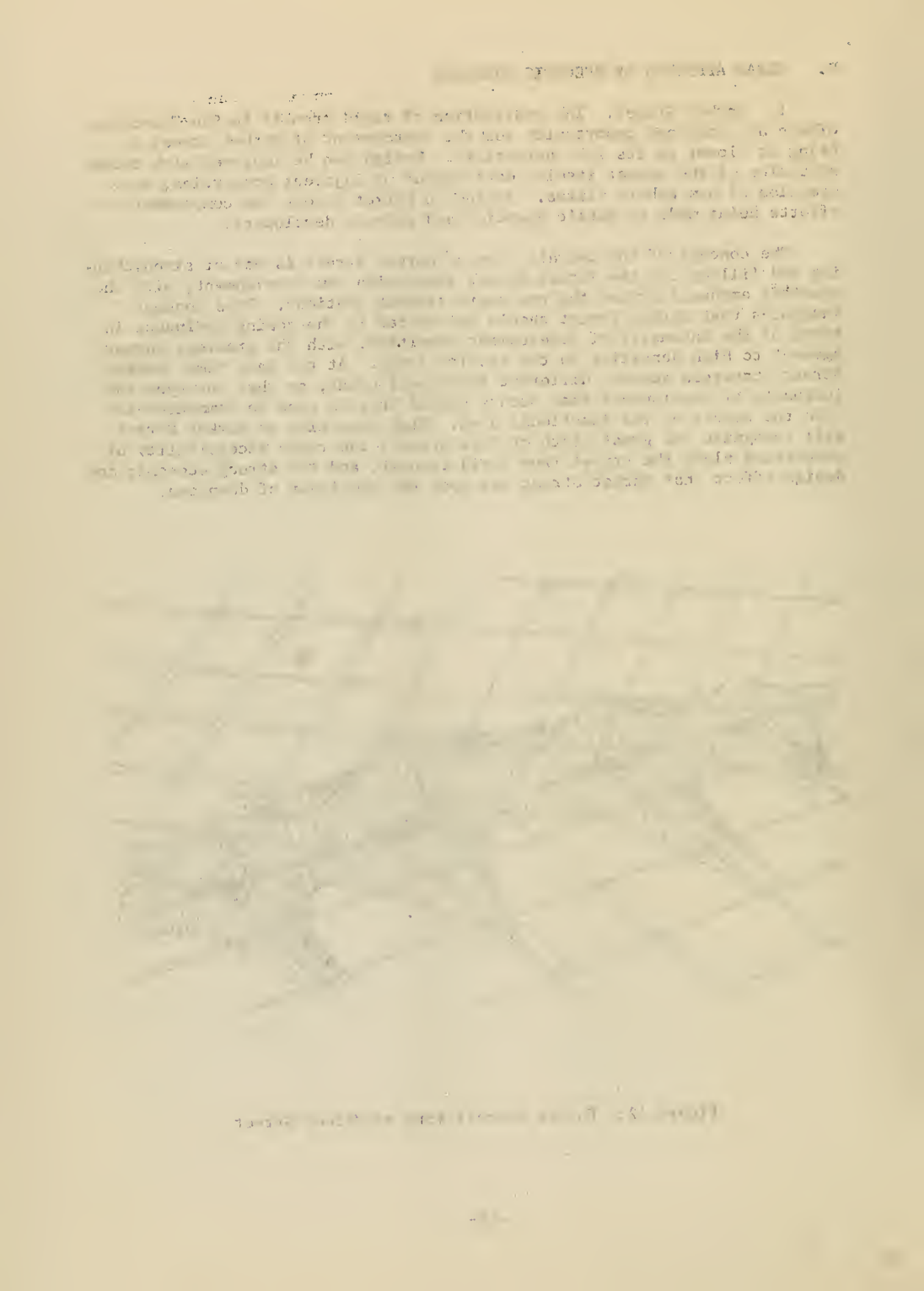


Figure 12: Future Overall Form of Market Street



More detailed design needs along Market Street which may be recognized by zoning include the following: easy access to transit station mezzanines, pedestrian cut-throughs off Market Street at mid-block both to the north and to the south, freedom from severe blocking of light by broad building masses on the south side of the street, continuous interest for pedestrians, especially in the retail area, the absence of sidewalk interruptions caused by driveways, and the careful relating of new construction to transit stations and newly-created public plazas.

2. Other areas. There are several other areas, strategically located throughout downtown, which are strongly affected as to design by present or future programs, and these must be recognized in the final zoning proposals. Understandably, because of direct public involvement in these areas, there are more possibilities for realization of a comprehensive design than at locations where zoning alone is in operation. The areas are:

a. The Golden Gateway, a redevelopment project bringing forth new ideas in integrated residential-commercial development and platform planning.

b. The Portsmouth Corridor, west of the Golden Gateway between Washington and Clay Streets, where development on the Old Hall of Justice site, impending street widenings and possible further garage facilities will reshape the area.

c. The possible creation of parking facilities in belt concentrations in other areas.

d. The Yerba Buena Center redevelopment project, planned to bring new facilities to the South of Market and anchor the eastern end of a large, depressed downtown section.

e. Possible new development in the Trans-Bay Terminal area.

f. The possibility of an urban University of California campus in the South of Market area, convenient to rapid transit and to downtown functions.

g. Small redevelopment projects which could develop out of the Rapid Transit Corridor Study in the vicinity of transit stations.

h. Further development of the Civic Center as new public buildings are added.

i. The Western Addition Area 2 redevelopment project, which abuts Van Ness Avenue and could form a basis for coordinated improvement of that boulevard.

j. Finally, the Port Authority lands, for which a plan is now being prepared that could lead to future re-use of pier areas and an opening up of the shoreline for use as an integral section of downtown.

E. SPECIFIC EXISTING BUILDINGS

1. Individual buildings which are design assets in the downtown area fall roughly into three categories:

a. Buildings which are of significance because of their connection with historical events or periods or their importance to the history of architecture.

b. Buildings, both early and more recent, which are significant as fine works of architecture.

c. Buildings which are significant for other reasons, such as their strategic location, their particular orientation, the open spaces around them, or the use to which they are put.

2. These design assets, mainly in the first two categories, are currently being identified throughout San Francisco by public and private agencies. The results of that project are expected to be available soon. The objective of this identification of buildings is to increase public awareness of these historical and architectural resources and encourage their preservation.

3. The means of preservation are varied but uncertain. Official designation of landmarks by a public body usually is the first step. It appears that preservation may be assured only by public acquisition or by some system which gives economic incentives for preservation to private owners. Zoning is related, but the controls or incentives available through zoning are only indirect and cannot absolutely assure preservation of individual buildings.

F. PUBLIC OPEN SPACES

1. The public open spaces in the downtown area, which serve as visual focal points, resting areas, collectors of sunlight and transitions between functional areas, are limited in number and location. Only six significant such spaces now exist:

a. Union Square, an asset to the retail area and a transition between the Retail and Hotel-Entertainment Districts.

b. Saint Mary's Square, now all but walled in by high buildings, a transition from the Financial-Administrative District to Chinatown.

c. Portsmouth Square, a historic location and an outdoor living space for Chinatown.

d. Huntington Square, a focus for the top of Nob Hill.

e. The Civic Center Plaza, center of the formal arrangement of Civic Center buildings.

f. Walton Square, part of the Golden Gateway residential development, serving that area and also the adjacent Jackson Square.

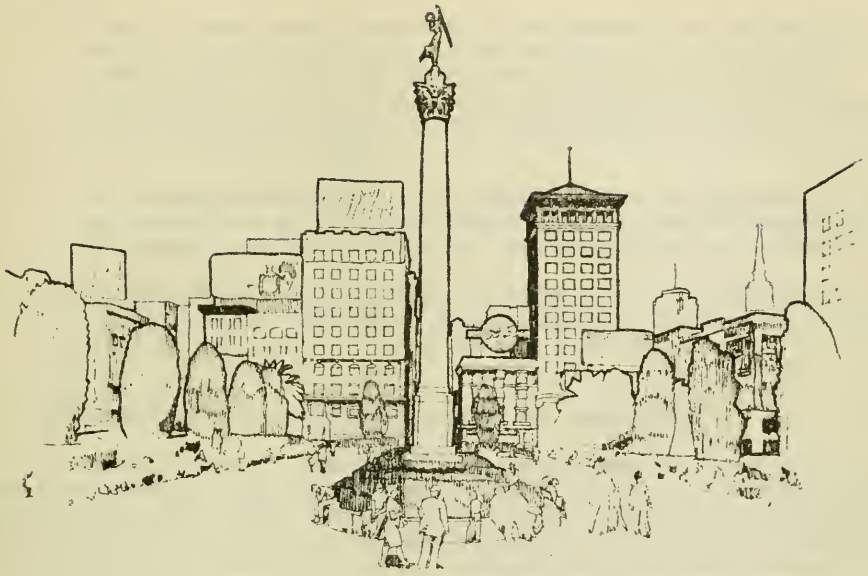


Figure 13: Union Square

2. None of these six open spaces, except for the Civic Center Plaza, is presently protected by special controls. Means should be found through height limits or other controls to safeguard the openness of these scarce downtown assets.

3. Future new open spaces which have been assured are the following:

a. Ferry Building Park, which will be created concurrently with the development of Market Street transit and the Golden Gateway development adjacent to it. No need for zoning protection is anticipated here, because of the comprehensiveness of the Golden Gateway plan.

b. Open spaces in Yerba Buena Center, at the platform level. Again, the redevelopment project plan itself will encompass protection for these open spaces.

c. Station plazas along Market Street, at Powell Street and elsewhere. Some of these plazas may require special zoning protection. At present, quite small public open spaces on Market Street exist in the California-Drumm intersection, around the Mechanics Monument at Bush and Battery, at Lotta's Fountain at Kearny and Geary, and at the Pioneers Monument at Grove and Hyde. These spaces are all located on the north side of Market Street and therefore afforded a maximum of sunlight.

4. Locations at which new open spaces are most sorely needed are the following:

a. Areas of predominantly residential development. The Midtown Residential area, in particular, is now devoid of outdoor recreation space, and this is one of the factors inhibiting new apartment construction. Public acquisitions may be necessary in these areas, with one possibility the creation of usable open space on the roofs of future parking garages.

b. The Financial-Administrative District, in which public acquisitions are impractical but in which private developers may be encouraged to provide plaza areas of limited size by means of zoning bonuses.

c. The waterfront, where the Ferry Building Park development might be expanded through use of Port lands to open up the shoreline. Zoning would probably not be a factor in such a development.

G. PEDESTRIAN MOVEMENT AND OTHER AMENITIES FOR PEDESTRIANS

1. Sidewalk widths. This is the primary determinant of the ease of pedestrian movement in the more congested areas. Established sidewalk widths are fixed, except in cases where an extraordinary change can be made in the entire makeup of the street, as on Market Street. In other cases, conditions of congestion will become worse unless sidewalks are effectively widened on private property by means of arcades, plazas and building setbacks.

2. Ease of access to buildings. This is a function of the design of the building itself, with access made easier by multiple entrances, particularly on more than one street, and by recessing the entrances from the public sidewalk. Again, the zoning provisions can encourage this type of aid to pedestrian movement.

3. Through passageways. If additional routes for pedestrian movement can be provided, walking distances can be shortened, street congestion can be lessened, and additional areas of pedestrian interest can be created in the interiors of blocks. This type of development would be especially beneficial in a north-south direction south of Market Street, in directions parallel to Market Street on the north side, and in a north-south direction within the Financial-Administrative and Retail Districts. (See Map No. 17 in the Appendix, showing existing pass-throughs aiding movement.)

4. Movement from one functional area to another, and across Market Street. This movement would be encouraged and eased by some of the methods just described, and also by encouraging fuller development at the boundaries of functional areas and on Market Street.

5. Freedom from conflict with motor vehicles in streets. This is perhaps the outstanding modern design problem in cities. Although a complete elimination of this conflict may be a far-off ideal, progress is being made in that direction by creation of separate precincts for pedestrian and motor vehicle movement, parking belts to intercept many of the vehicles before they reach the core, and grade separation such as is occurring in the Golden Gateway. The pedestrian-vehicle conflict is currently at its worst in the office and retail core, and on Market Street, Broadway and Van Ness Avenue.

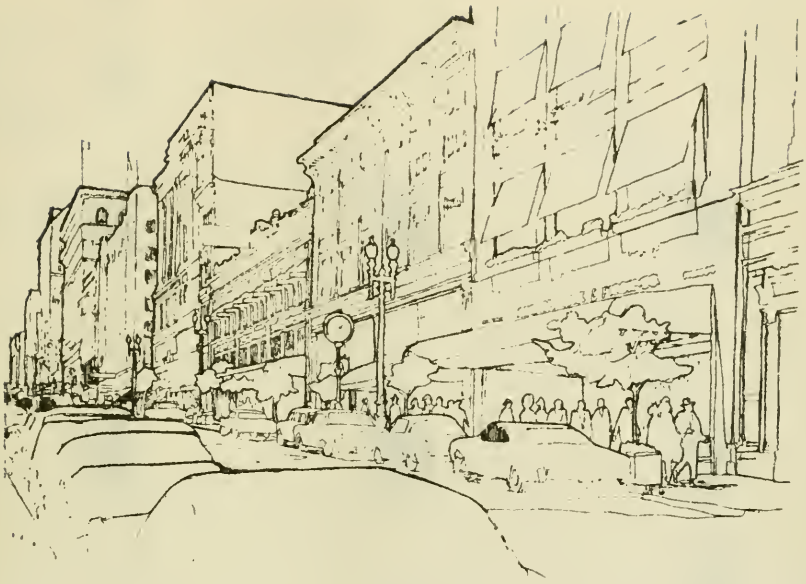


Figure 14: Continuous Shopper Interest on Post Street

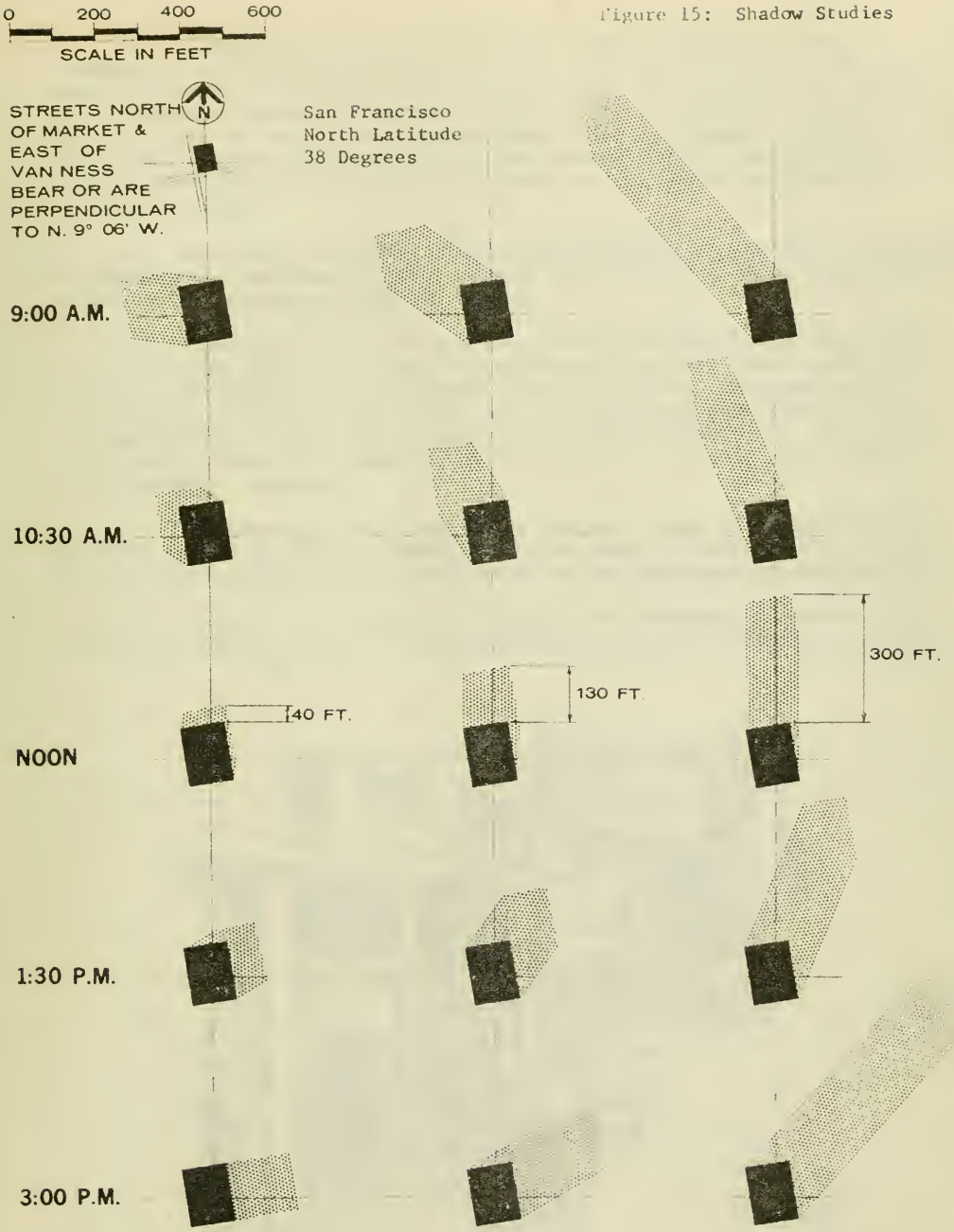
6. Freedom from sidewalk hazards. Again, this is mainly a matter of pedestrian-vehicle conflict, since the most severe hazards are driveways for off-street parking and loading, and loading and unloading of goods across the sidewalk from trucks at the curb.

7. Continuity of pedestrian interest. This is a positive factor that affects the pleasantness of downtown activities and the health of business, particularly in the retail area. Continuous shops, show windows and other features creating interest can be encouraged by the zoning provisions. Such interest for downtown shoppers, as well as other amenities in the downtown shopping area, are important in view of the presence of these amenities in competing suburban shopping centers.

8. Resting places. Open spaces for rest during shopping or business visiting, and for noontime enjoyment by downtown workers, are a pedestrian amenity mentioned earlier. Continuing efforts should be made to provide more of these spaces on public and private property.

9. Sunlight to streets and other open spaces. This amenity is often not appreciated fully until it is taken away. Although continuous sunlight at all times of the day and all seasons of the year cannot be guaranteed to many open spaces, because of the great variety of angles and distances at which shadows are cast, existing sunlight should be preserved wherever there is a clear opportunity for such preservation. Such an opportunity exists primarily at the large public squares.

Figure 15: Shadow Studies



Example: Shadows cast by a building 160 feet in height.

10. Circulation of air. In contrast to most other cities, San Francisco is not often troubled by lack of natural air circulation. The problem downtown can often be the opposite: unpleasant wind currents caused by the downward diversion of high-level wind by tall buildings. This problem is most severe in the flatter areas and where single buildings reach much higher than those around them. It is less serious in the areas sheltered from the west wind by Nob Hill and in areas where the heights of buildings are relatively uniform.

11. Protection from rain. This seasonal pedestrian need can be furthered by shortening of walking distances between downtown destinations, and by providing covered passageways through blocks.

12. Human scale. This is a quality sought in urban design that tends to overcome the mental and physical fatigue resulting from the overpowering effects of buildings and other inhuman conditions of the urban environment. It involves a uniformity and harmony among buildings and attention to architectural detail, relating the observer to his whole environment. Zoning will not directly control this quality, but in some ways there are opportunities for a favorable influence.

13. Landscaping. This factor also answers a human need, contributing scale in some situations and adding to the enjoyment of downtown activities. In some ways landscaping of building sites can be encouraged through zoning.

14. Avoidance or screening of unsightly or blighting influences. The unfortunate effects of these blighting influences have been mentioned earlier.

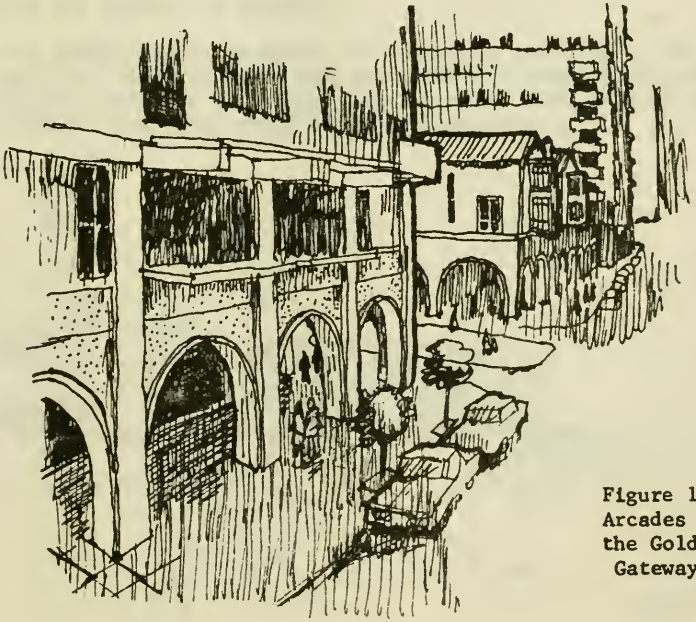


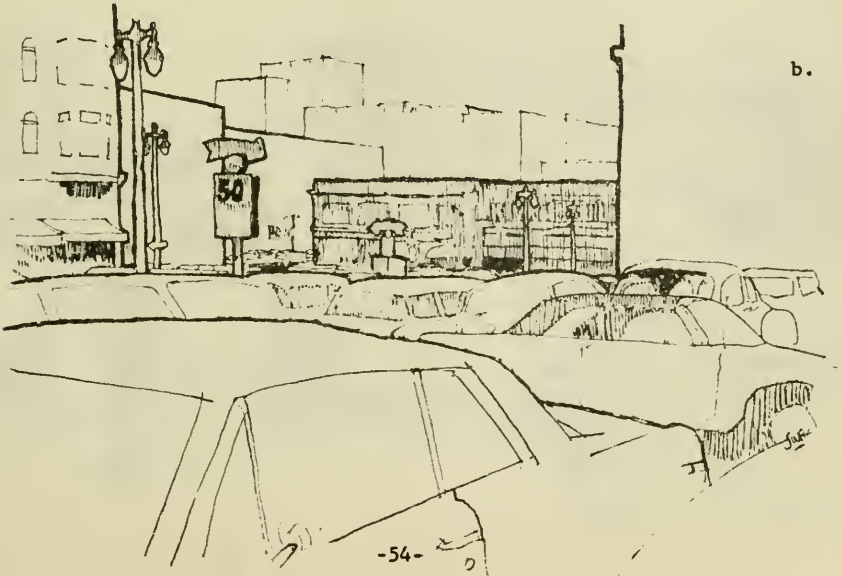
Figure 16: Arcades in the Golden Gateway

Figure 17: Unscreened Parking Lots a.

Some improvements can be made through requirements for screening of open uses, most especially of parking lots, better treatment of side building walls, and better arrangement of signs. Lessening of the impact of parking lots through construction of opaque barriers to car roof level, landscaping and careful driveway placement should be regarded as the number one need.

H. AMENITIES FOR PERSONS IN VEHICLES

1. The design amenities needed by persons in automobiles and in surface transit vehicles, although fewer than are needed by pedestrians, are often similar to those outlined in the previous section. Much of what has just been said is therefore also applicable to persons in vehicles.



b.

2. One special need not previously covered is for improved passenger loading and unloading facilities for private automobiles, taxis and special buses. In cases in which the sites of hotels, places of assembly and transportation terminals are sufficiently large, off-street passenger loading facilities should be provided.

I. AMENITIES FOR BUILDING OCCUPANTS

1. Efficiency of building design. This is not the main concern of a zoning ordinance, since buildings tend to have efficiency in their design for economic reasons and it is normally the external effects of the buildings that tend to need regulation. At the same time, the zoning ordinance must recognize desired efficiencies in building construction and operation, including minimum floor sizes needed and influences upon maintenance costs. Internally, there are often greater flexibilities available in building design than formerly, due to new methods of construction and advances in mechanical installations.

2. Daylight. With improved lighting systems, the need for daylight to commercial floor space, if it exists at all, may be mainly a psychological and prestige factor. This enables buildings to be thicker, and thus may incidentally cause blocking of light and views for nearby buildings and streets. Windows for all types of buildings are still a factor to be recognized, although they may be an essential need only for residential buildings and hotels.

3. Views. As in the case of daylight, views have psychological and prestige advantages regardless of the physical need for outside window exposure. Certainly one of the reasons for the great height of some new buildings is the creation of views for their occupants. With this high investment in views, the location of other tall structures nearby becomes important, as well as the treatment of the rooftops of lower buildings. The rooftop clutter of mechanical equipment which has occurred often in the past should be avoided for future buildings by enclosure of this equipment on the roof or provision of special mechanical floor levels.

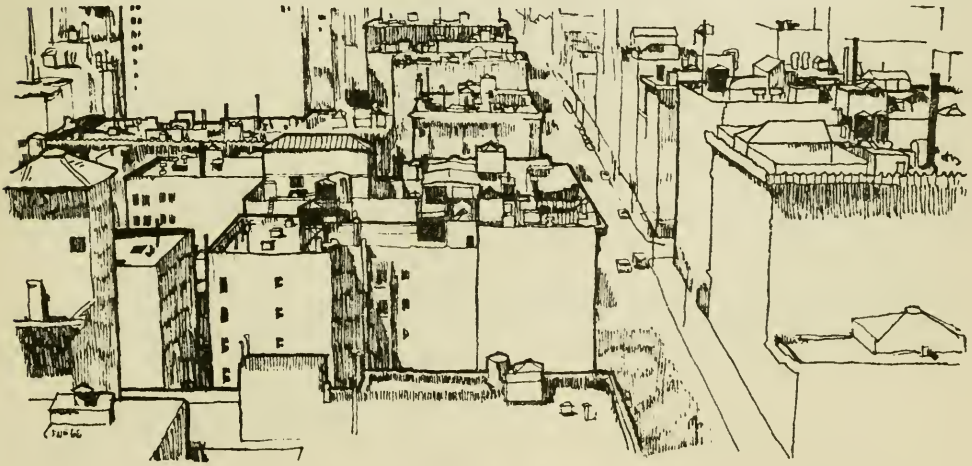


Figure 18: Rooftop Clutter

4. Mixed-use buildings. Mixtures of use within a single building, especially of retail and office uses, have been common in the past, and there are signs that these mixtures may increase, particularly with the placement of apartment floors above commercial space. Such mixtures, at proper locations, can produce an efficiency in land use, and they can also produce amenities for building occupants. Normally zoning neither encourages nor discourages these mixtures, but possibilities of this kind should be taken into account in use, bulk and parking requirements.

5. Existence of nearby convenience facilities. Where mixture of uses within a single building does not occur, there is usually a need in downtown locations for convenience facilities of some kind nearby. Examples are small shops in office areas, restaurants in retail areas, and grocery stores in high-density residential areas. Where new construction comes rapidly in these areas, there is a tendency for convenience facilities to be forced out. The service performed by convenience facilities should be recognized and in some cases emphasized in the zoning ordinance. The classification of areas into use districts should be tempered by a realization that different uses of complementary types are needed within each district.

IV. CHARACTERISTICS AND REQUIREMENTS OF SPACE USE AND ACTIVITY (SUPPLEMENT)

The material in this section adds to the 39-page section with the same title in Working Paper No. 1.

The principal additions concern major downtown office space, and off-street parking needs. Analysis in the main text is keyed to tables and maps in the Appendix to this paper. This supplemental material consists mainly of a series of 17 maps, mostly referred to in Working Paper No. 1 but now drafted for reproduction, more detailed building inventory data, and off-street parking information made available through the Downtown Parking and Traffic Survey of the Department of Public Works and through separate surveys of parking for residential buildings.

A. BUILDING SPACE INVENTORIES

Floor Area Ratio and Employment Density by Block

These indices of development density are shown on Maps 5 and 6 in the Appendix. The data bank used to develop these block averages is based upon the 1964 Community Renewal Program survey of downtown buildings, supplemented and updated in some respects to 1965. These two maps are further described on pages 24 and 25 of Working Paper No. 1.

Tall Buildings

This map, described generally on page 24 of Working Paper No. 1, appears in the Appendix to this paper as Map No. 7. Buildings classified as tall buildings for this purpose are all those with a height of at least 118 feet or 10 stories.

Also included in the Appendix to this paper, as Table 23*, is a full list of these tall buildings, including the height of each in stories and feet, the year of its construction, and its floor area ratio (ratio of the total floor area of the building to the land area occupied by it). The buildings are listed in the order of Assessor's Block numbering, and these block numbers can be seen on Map No. 7 when reference is made to that map.

There are 185 tall buildings in the Downtown Zoning Study Area on this list, including 105 office buildings, 36 apartment houses, 25 hotels, seven retail buildings, three industrial buildings, and nine clubs, auditoriums or institutions. At the end of the list are five additional tall buildings that were under construction in June 1966.

The floor area ratios of these 185 buildings are particularly noteworthy, and it is obvious from an examination of this list that quite large buildings have been constructed with floor area ratios that are relatively low, due to the adequate size of their sites.

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* Tables 1 through 22 are contained in the Appendix to Working Paper No. 1.

Taking as a standard of high density the basic maximum floor area ratio of 16:1 now in effect in the City Planning Code (without the present corner and through lot bonuses taken into consideration), Table 24 lists the seven existing downtown office buildings which exceed that basic ratio. Of these seven buildings, four were constructed before any maximum floor area ratio was imposed in 1960, and the remaining three were approved while the 20:1 limit for the C-3 Zoning District was in effect from 1960 to 1964. Many other tall buildings have of course been built during all these periods at a floor area ratio of less than 16:1.

When the present system of corner and through lot bonuses is considered, only two buildings -- the Wells Fargo (Dillingham) and Hartford Buildings -- exceed the limits of the floor area ratio system now in effect. Were the Hartford Building at a corner location, rather than on the midblock site that was chosen, it also would conform to the present 16:1 system with its bonuses. Both the Wells Fargo and Hartford Buildings, as well as others now exceeding 16:1, have certain publicly advantageous features such as arcades, rapid transit access and less than 100 per cent lot coverage at upper floors. These features are now being weighed in the process of developing a more sensitive bonus system to be used together with the basic floor area ratio limits for future buildings which will be recommended in the Downtown Zoning Study.

Also listed in Table 24 are two additional buildings not yet constructed which have been recently approved and will exceed 16:1. These two buildings, the Bank of America at 52 stories and the First Savings Building at 26 stories, both use the present system of 16:1 with corner and through lot bonuses. In addition, both buildings take advantage of surplus floor area for an existing building that will remain on their sites, adding the extra permitted floor area not used by the existing building to the space being newly constructed. The Bank of America, with its low coverage, plaza, arcades and pedestrian walk-throughs, will be particularly notable for the amenities that it offers to the city.

New Construction and Major Alterations

This map, described on pages 27 and 28 of Working Paper No. 1, appears as Map No. 8 in the Appendix to this paper.

The map includes sites of future buildings where the development proposals were reasonably definite in January 1966. Some of these proposals are listed in Table 22 in the Appendix to Working Paper No. 1. Since that paper was printed, building permit applications have been approved by the Department of City Planning for the Bank of America Building at California and Kearny Streets (1,762,000 gross square feet of floor space), the First Savings Building at California and Sansome Streets (186,000 square feet; not shown on Map No. 8), and a building to be occupied by the Pacific Telephone and Telegraph Company at Folsom and Hawthorne Streets (180,000 square feet). Other new sites of proposed major office buildings are for the Universal Land Company at Market and Post Streets and for the Pacific Gas and Electric Company at Mission and Beale Streets; these two sites together could accommodate 750,000 square feet of floor space or more under the present zoning standards. In addition, plans for the four remaining commercial blocks of the Golden Gateway redevelopment project are now going forward, with a likelihood of approximately 1,000,000 square feet of office space being built in the first of those blocks

(the block fronting on Market Street and the Ferry Building Park) in the present decade. Further buildings elsewhere in the downtown area are being planned but have not yet reached the stage of public announcement.

Two graphs appearing here in the text of this paper (Figures 19 and 20) plot the accumulation of office buildings ten stories or more in the downtown area over a sixty year period. Both the number of these buildings accumulated at each date and the total gross floor space in these buildings are shown. On each graph there are three curves: one for the Financial-Administrative Statistical Area (bounded by Kearny and Washington Streets, The Embarcadero, Mission and Third Streets, and including also the block occupied by the Appraisers and U. S. Customs Buildings, as shown on a map in the Appendix to Working Paper No. 1); a second for the somewhat larger Financial-Administrative District Space Capacity Study Area, shown on Map No. 9 in the Appendix to this paper; and a third for the entire Downtown Zoning Study Area (bounded by Vallejo and Franklin Streets, the Central Freeway, Bryant Street and San Francisco Bay).

Buildings shown on these graphs that are now existing or under construction are those listed in Table 23 in the Appendix to this paper, and estimates to 1969 are for buildings for which there are reasonably definite development proposals. No accounting is made for the possible removal of some existing buildings of ten stories or more, other than the Nevada Bank Building now being removed for the Wells Fargo Building, and the Pacific National Bank which will be removed for the Bank of America Building.

These two office building graphs are susceptible to several interesting observations:

First, that major office buildings have become larger on the average over the years, as seen from the fact that the curves on the graph showing the number of buildings accumulated have become less steep in recent years than the curves on the graph showing the accumulated space in these buildings, in contrast to earlier periods.

Second, that the current pace of major office building construction, in the latter half of the 1960's, is extraordinary when compared with the construction pace in previous periods.

Third, that downtown office construction tends to proceed in cycles, so that the present construction may be considered less extraordinary if the slack periods in the 1930's and 1940's are taken into account and if a future lessening of the pace can now be anticipated as space built in this current period is absorbed.

Fourth, that a considerable amount of office space (generally of lesser intensity) has been and most likely will continue to be constructed downtown outside of the Financial-Administrative District and adjacent areas, a fact which should be taken into account in discussion of the capacity of the downtown area for new office space.

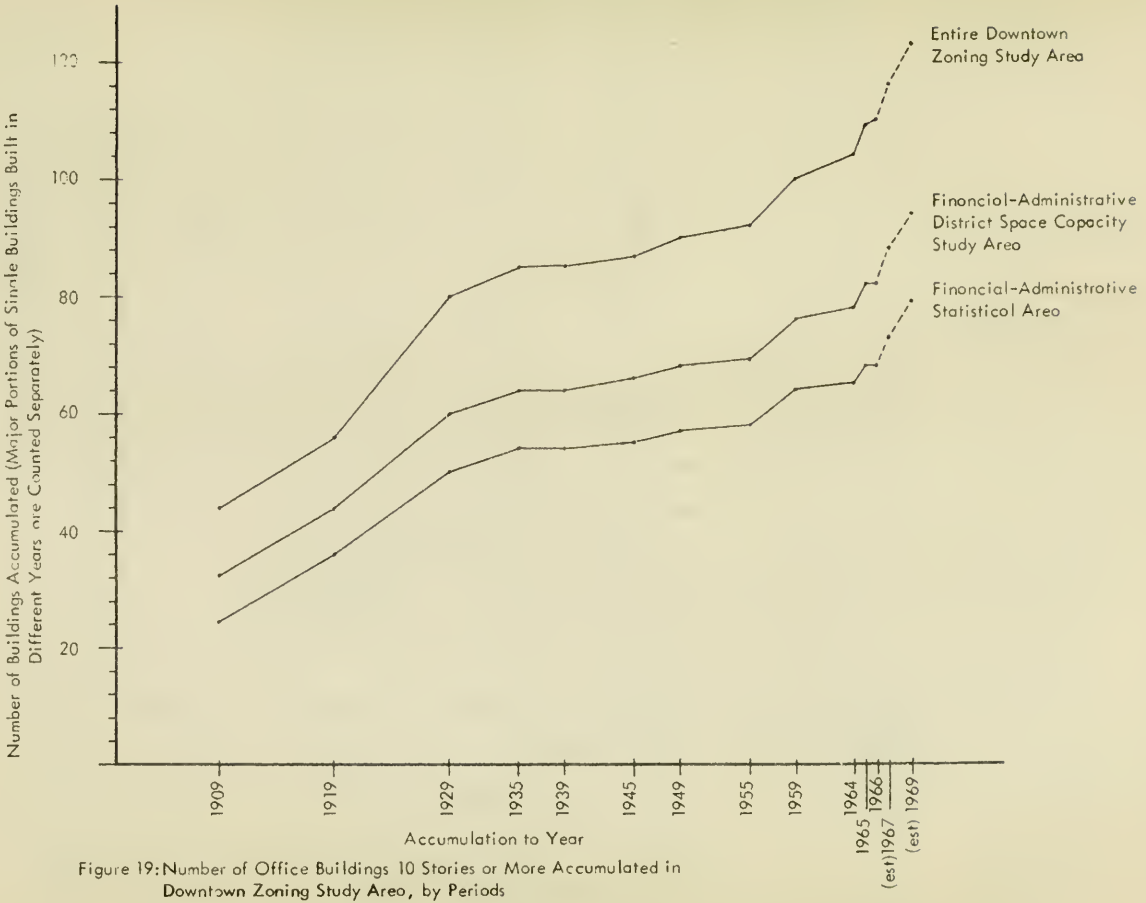
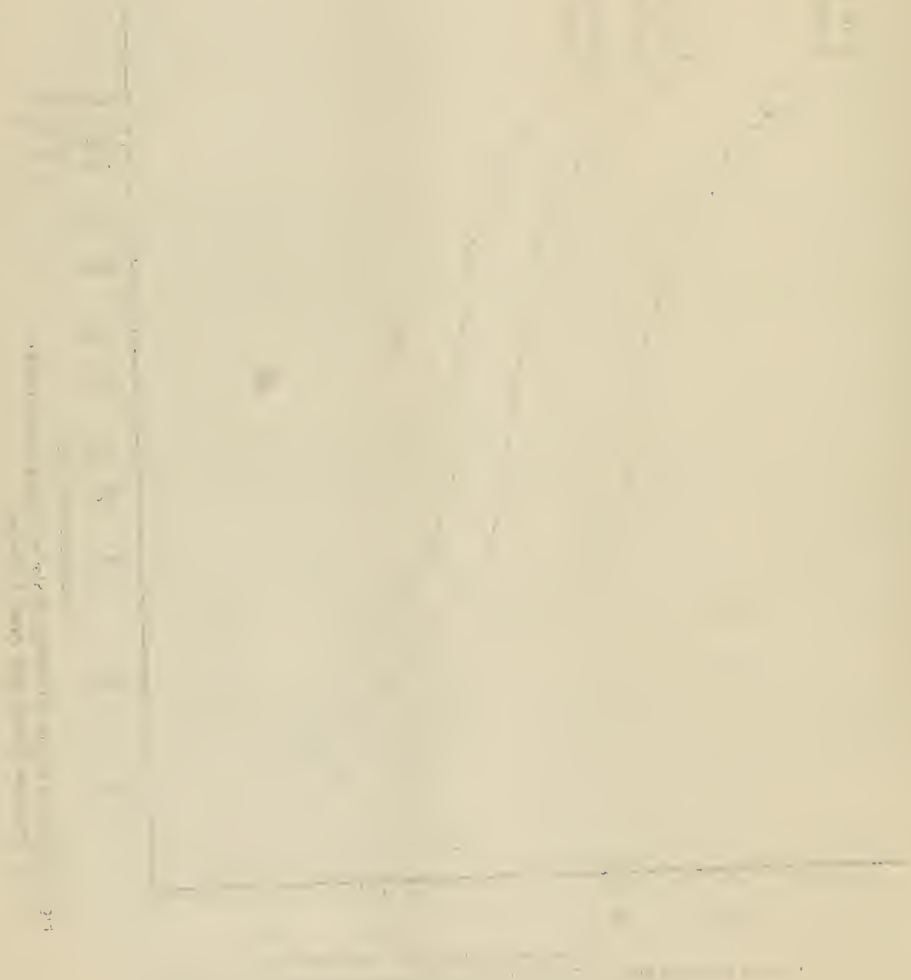


Figure 19: Number of Office Buildings 10 Stories or More Accumulated in Downtown Zoning Study Areo, by Periods



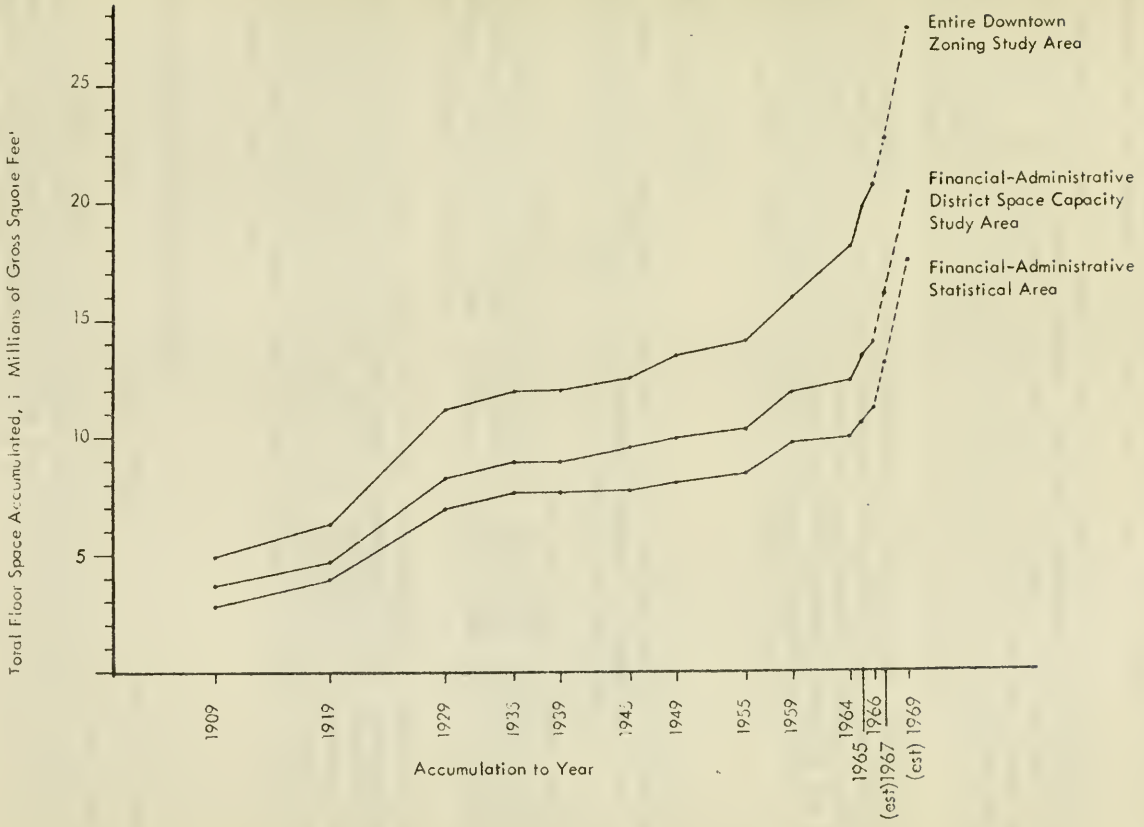


Figure 20: Total Space in Office Buildings 10 Stories or More Accumulated in Downtown Zoning Study Area, by Periods

Financial-Administrative District Space Capacity Study

This study, concerning the capacity of a portion of downtown for new office space, is set forth in pages 48 through 57 of Working Paper No. 1. Map No. 9 in the Appendix to this paper shows the application of the criteria described in those pages to the properties in the area studied.

Working Paper No. 1 should be carefully consulted for the method of analysis used in this space capacity study and interpretation of the results of the study. To supplement that discussion, a graph is included here in the text of this paper (Figure 21) which depicts in visual form the figures appearing in Table 21 in the Appendix to Working Paper No. 1, and compares the space capacities indicated there with the projections for actual office space increase to 1980 discussed on pages 40-43, 46-47 and 58-59 of that paper.

It is important to note here again that the criteria for susceptible sites in the space capacity study are deliberately conservative and that high projections are used. Also, in order to test the space capacity figures fully, the entire increase in downtown office space to 1980 has been placed in the space capacity study area, rather than spread throughout downtown according to the existing patterns indicated in the graphs in Figures 19 and 20.

Headquarters Offices

Data on the locations of home and regional offices of major firms have been furnished by the Greater San Francisco Chamber of Commerce. These locations are indicated on Map No. 10 in the Appendix to this paper.

The map distinguishes between home offices and major regional offices of firms which have their home offices elsewhere. Where the building occupied by the headquarters firm is known to be owned by that firm, this fact is also indicated. Firms of all types are shown, including retailing and manufacturing as well as service industries.

In order to provide clarity in the map, an area smaller than the total Downtown Zoning Study Area has been shown. Elsewhere in the Downtown Zoning Study Area, not shown on this map, there are nine additional home offices and no additional regional offices. Three of the additional headquarters offices are located further west along Market Street, one on Van Ness Avenue, one at O'Farrell and Taylor Streets, one at Grant and Pacific Avenues, and three in the South of Market area.

Other Downtown Development Trends

In recent months, these additional trends have been especially noteworthy:

a. A single group of developers has begun plans for the four remaining commercial blocks in the Golden Gateway redevelopment project. This development, with approximately three million square feet of total building space, is expected to include a hotel and cultural facilities in addition to major office buildings and parking garages.

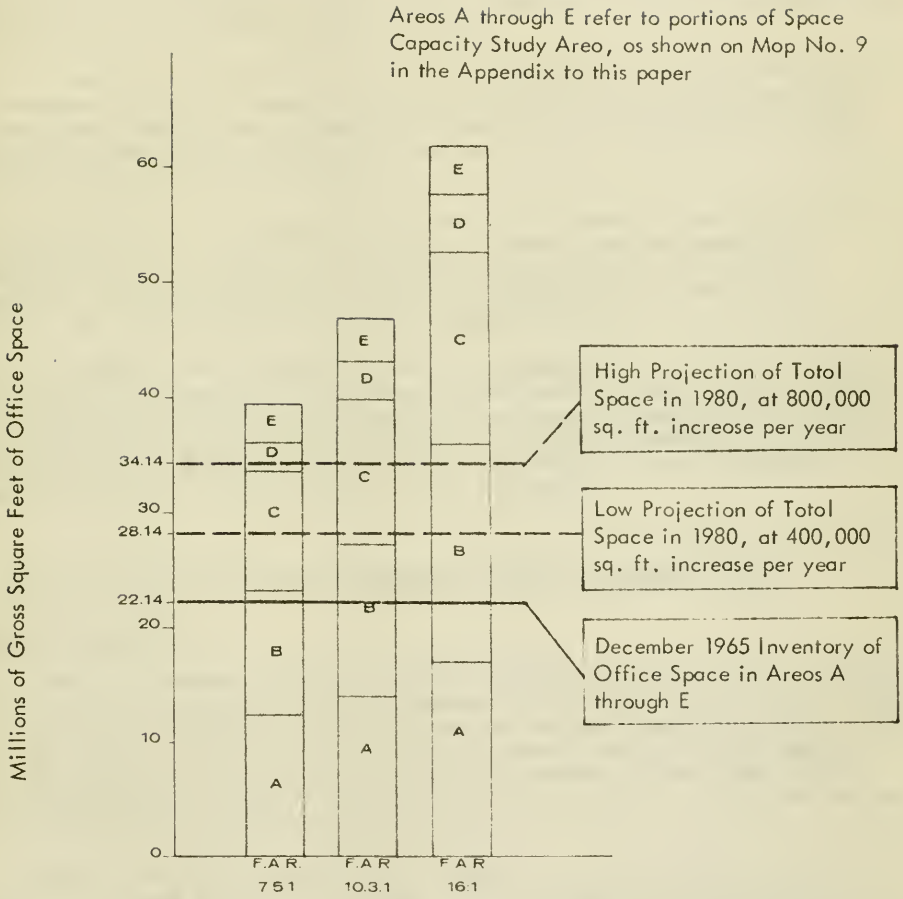

Areos A through E refer to portions of Space Capacity Study Areo, os shown on Mop No. 9 in the Appendix to this paper
Millions of Gross Square Feet of Office Space
60
50
40
34.14
30
28.14
22.14
20
10
0
E
D
C
B
A
High Projection of Totol Space in 1980, at 800,000 sq. ft. increose per year
Low Projection of Totol Space in 1980, at 400,000 sq. ft. increase per year
December 1965 Inventory of Office Space in Areos A through E
F.A.R. 7.5.1
F.A.R. 10.3.1
F.A.R. 16:1
Total Space Capacity at Varying Floor Area Ratios for New Development

Figure 21: Office Space Projections Related to Office Space Capacity, San Froncisco Finoncial-Administrative District Spoce Capacity Study Area

b. A project plan for the Yerba Buena Center redevelopment area has been given approval by the Board of Supervisors, including space for offices, stores, sports and convention facilities, hotels and parking.

c. Market Street planning has advanced with approval of a plaza at Powell Street, lengthening of station mezzanines, and drafting of an application for Federal assistance to help create a regional station at Davis and Drumm Streets. At the same time, there is pronounced interest in major private development near the Market Street stations.

d. Owners of properties in the Northern Waterfront area east and north of Telegraph Hill have proceeded with plans for office and other facilities in that area. Waterfront studies being conducted by the Department of City Planning and the Port Authority have continued, with a land use survey published by the Department last April.

e. There are continuing prospects for a new campus of the University of California to be located in the South of Market area, although the University is also considering other sites both inside and outside San Francisco. Both the Department of City Planning and the University are studying the probable impact of various possible sites.

f. Interest has increased recently in conversion of a number of existing wholesale and industrial buildings in the South of Market area to office use, particularly in the section south of the Financial-Administrative District The rigid off-street parking requirements of the City Planning Code for the C-M District in which these properties are located have been a conspicuous factor affecting the practicality of such conversion.

B. RESULTS OF THE SAN FRANCISCO DOWNTOWN PARKING AND TRAFFIC SURVEY

General Description

A complete Downtown Parking and Traffic Survey has recently been conducted by the Bureau of Engineering of the Department of Public Works. Pertinent data from that survey have been analyzed as part of the Downtown Zoning Study. The data are results from interviews of 153,334 drivers and 29,777 passengers. This represents 153,334 vehicles (36,911 with commercial plates and 116,423 with non-commercial plates), very close to 100 per cent of all vehicles parked in the survey area between 10 a.m. and 6 p.m.

The area covered by the Downtown Parking and Traffic Survey is shown on Figures 22, 23 and 24 here in the text. This represents the major portion of the Downtown Zoning Study Area, excluding the predominantly residential and industrial portions. The survey area was broken into the functional areas show on the Figures. These were made as similar as possible to those used elsewhere in the Downtown Zoning Study although it was necessary to make small adjustment in boundaries to follow the cataloguing system of the Downtown Parking and Traffic Survey which arranged data to the nearest intersection. The survey had as its objective the collection and analysis of important data on downtown parking and movement of vehicles and persons. Exhaustive data have been collected and compiled by use of computers to ascertain trip origins and destinations, pedestrian movement, trip purposes, garage use, distribution of demand and supply of parking, loading trips and accumulation of vehicles over time.

Data were compiled for a 10 a.m. to 6 p.m. period, according to ten categories of trip purpose--shopping, business visiting, work, sales or service, freight load or unload, passenger load or unload, medical or dental, social, home, and other (miscellaneous).

Trip Origins for Vehicles Parked in the Survey Area

Origin data by trip purpose are contained in Table 25 in the Appendix. Approximately 68 per cent of vehicle trips into downtown San Francisco are known to originate in the city, and the balance of 32 per cent originate in the surrounding counties. Of all trips, 13 per cent originate in the Peninsula or San Jose, 11 per cent in the East Bay and six per cent in Marin County and Santa Rosa.

Over 34 per cent of all vehicle trips were for work purposes, the highest proportion of all purposes. Of the drivers coming to work downtown, 57 per cent came from San Francisco and 43 per cent from outlying areas. 18 per cent of the vehicles came from the Peninsula and San Jose area, 14 per cent from the East Bay, and ten per cent from the Marin County and Santa Rosa areas.

Of all the shopping trips destined for downtown, 20 per cent originated in downtown and a total of 69 per cent originated in San Francisco while the balance of 31 per cent originated outside the city limits. It was found that 13 per cent of the shopping trips by non-transit vehicles came from the Peninsula and San Jose and 11 per cent came from the East Bay.

Almost 70 per cent of all trips for business visiting purposes originated in San Francisco. Twenty-seven per cent of the trips originated in downtown San Francisco.

Approximately 90 per cent of the vehicles involved in freight handling came from San Francisco and the balance from other counties. It is estimated that 54 per cent of all freight trips came from downtown itself and 39 per cent of all sales and service trips were locally generated.

Destinations and Purposes of Driver Trips Downtown

Driver destinations for work purposes, as shown on Table 26 in the Appendix, represent 40,000 vehicles or 33 per cent of the total destinations in the survey area. Twenty-six per cent or 31,000 vehicles were for business purposes. A total of 71,000 vehicles or 59 per cent of all trips therefore were for work and business purposes. Eight per cent were for shopping and almost ten per cent were for freight handling purposes. The balance of trips were for all other purposes including six per cent for miscellaneous and unknown reasons. Table 27 in the Appendix indicates these data for sub-areas of the survey area by per cent.

The Financial-Administrative area draws the largest proportion (20 per cent) of downtown trips. Over three-fourths of the drivers coming to the Financial-Administrative area were destined for work or business purposes. Approximately 48 per cent went to the area for work and 28 per cent for business visiting. Approximately eight per cent of the trips were for freight handling. About ten per cent of all drivers listed the Financial-Administrative area as their destination for work. Estimates earlier in this Downtown Zoning Study place 41 per cent of downtown employees in this area.

The Retail area with its concentration of shopping purposes had 11 per cent of total downtown destinations. Thirty-three per cent of the drivers going to the Retail area came primarily for shopping purposes, 23 per cent for business visiting and 21 per cent for working purposes. Eight per cent of the driver destinations there were for freight loading and unloading.

The Hotel-Entertainment, Club and Medical area draws a significant amount of total driver destinations (13 per cent) and the major purposes are for passenger loading, medical-dental and social as well as work and business. The Civic Center area with nine per cent of the total destinations had business visiting as a major purpose as well as work. The South of Market-East area had a significantly high proportion of work destinations and eight per cent of total trips.

The distribution of destinations within downtown for drivers of non-commercial vehicles as shown on Figure 22 in the text indicates the areas of intense concentration of destinations in the Financial-Administrative, Retail, Civic and Market Street areas. Examination of the destinations for drivers of non-commercial vehicles also reveals freeway users outnumbered local street users where destinations were in parts of the Retail and Financial-Administrative areas, in a few blocks in the South of Market-East area, and in selected blocks in the Nob Hill and Hotel-Entertainment, Clubs and Medical areas where there are hotels and other regional uses.

Parking Accumulation and Duration

An examination of the times between 10 a.m. and 6 p.m. when trucks over 40 feet in length were parked reveals that except in the areas South of Market they tended to accumulate earlier than non-commercial vehicle peak accumulations The greatest accumulation of trucks in the Retail and Financial areas occurred in the morning through mid-afternoon hours. Part of this pattern may be attributed to retail, hotel and business establishments preferring not to have service deliveries interfere with patrons.

Non-commercial vehicles parked downtown have a longer period of high accumulation than do commercial vehicles. Passenger car accumulations between 10 a.m. and 6 p.m. were heaviest from 10:30 a.m. to 4:00 p.m. as opposed to 11:00 a.m. to 3:00 p.m. for commercial vehicles. The peak hour accumulation between 10 a.m. and 6 p.m. for commercial vehicles was earlier (12:30 p.m.) for the entire survey area than that for non-commercial vehicles (1:30 p.m.). In the Retail area the peak commercial vehicle accumulation was at 11:00 a.m.; it was at 2:00 p.m. there for non-commercial vehicles. In the Financial-Administrative area the peak commercial accumulation was at 11:00 a.m. and the peak non-commercial accumulation was at 1:00 p.m. The peak commercial vehicle accumulation was later than that for non-commercial vehicles in the area west of the Civic Center, and the Civic Center, South of Market-East and South of Market industrial areas (see Table 28 in the Appendix).

In examining the duration of parking between 10 a.m. and 6 p.m. as indicated in the parking and traffic data, the typical pattern throughout downtown was short duration (up to one-quarter hour) for business visiting, freight loading and unloading purposes. Passenger loading and unloading were significant short duration purposes in the Hotel-Entertainment-Club area and on Nob Hill. Also typical for the downtown as a whole with the exception of Chinatown was long duration (4 to 8 hours) parking for work purposes. In the Financial-

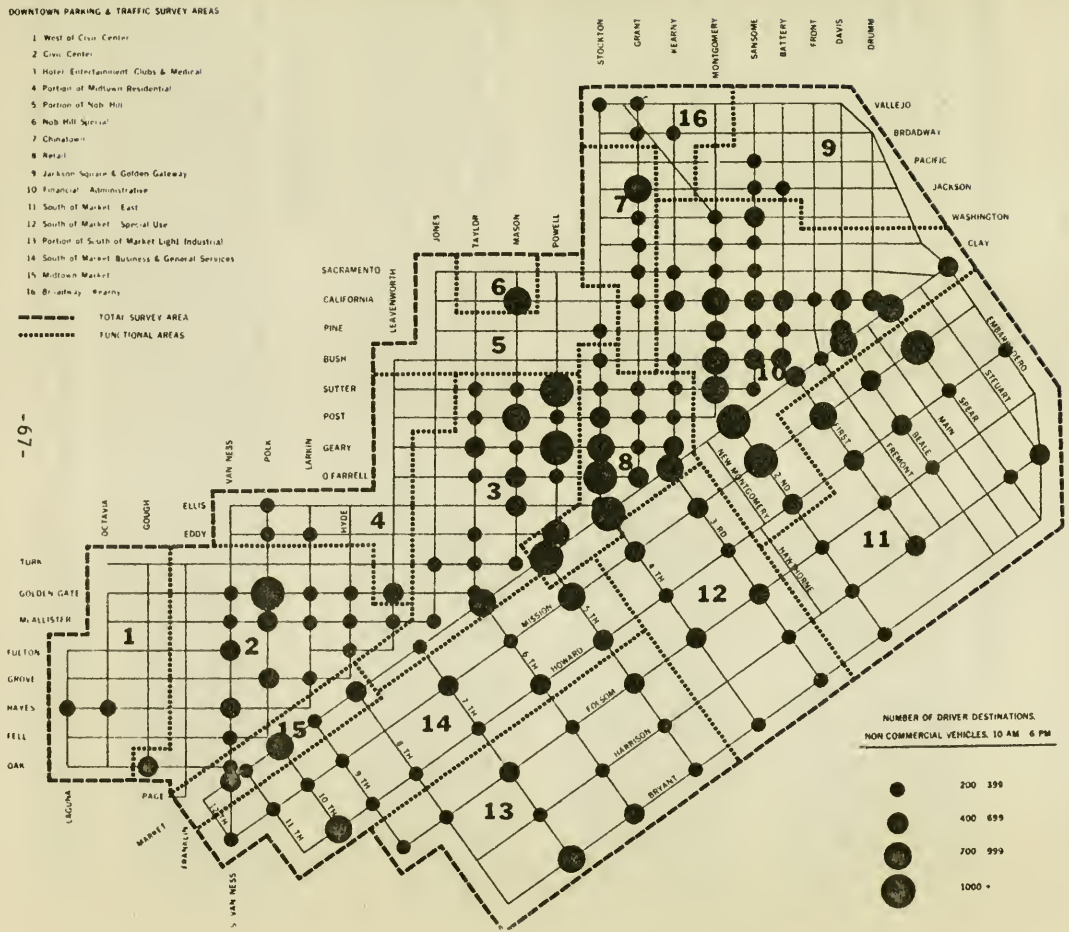


Figure 22

DESTINATION OF DRIVERS BY NEAREST INTERSECTION

Source Downtown Parking and Traffic Survey
Department of Public Works 1965

SAN FRANCISCO

downtown zoning study

C-3 AND ADJACENT DISTRICTS

Administrative, South of Market-East and Midtown Market areas there was also a significant amount of parking for work purposes of 2 to 4 hour duration.

Parking duration for shopping purposes was relatively short in the China-town area (up to one-half hour) and moderately long (1 to 4 hours) in the Retail area. In the high activity portion of the downtown, business visiting purposes were of moderate duration (one-quarter to 2 hours) as well as short duration.

The short time shopping trips (up to one-half hour) between 10 a.m. and 6 p.m. were approximately 11 per cent of total trips; short time freight loading up to one-half hour and eight per cent of the total; and long term work trips of 4 to 8 hours were 17 per cent of the total trips between 10 a.m. and 6 p.m.

Walking Distance from Place of Parking to Driver's Destination

An examination of the walking distance by drivers from parking place to destination reveals that in the dense areas of the downtown, people tended to walk greater distances. In the periphery of the survey area, they walked lesser distances. People tended to walk longer distances for shopping and work purposes than for business visiting or sales or service purposes. The distributions of trips by purpose and area are indicated for shopping trips in Table 29, for work trips in Table 30 and for business visiting trips in Table 31, all to be found in the Appendix.

To reach destinations in the Retail area 41 per cent of the motorists walked 1000 feet or more to shop, and 69 per cent of drivers walked 500 feet or more to shop. Over 29 per cent of the drivers coming to this area for business walked 1000 feet or more but 48 per cent of the drivers coming to work walked 1000 feet or more. In the Financial-Administrative area 57 per cent of the motorists coming to work walked more than 500 feet and 35 per cent walked more than 1000 feet. Only 18 per cent of the persons coming for business visiting in this area walked 1000 feet or more.

Both the Retail and Financial-Administrative areas are compact. They are served by two different types of parking, i.e. internal and peripheral. The close-in parking tends to have a higher rate structure. Peripheral parking for both areas is used by workers and shoppers in these areas--particularly the Financial-Administrative area where easy access from freeways serving more distant origins is important. The internal and closer-in peripheral parking is frequented by business visitors and drivers with sales and service purposes.

Impact of Major Garages

The major garages in the downtown area, indicated in Table 32 in the Appendix and on Figure 23 here in the text, typically serve a highly directional, densely populated business area. Patrons of these garages tend to walk toward the congested office, shopping and entertainment centers. The patrons of peripheral garages such as the Civic Center and Fifth and Mission garages fan out to major centers of employment and shopping. Patrons of the internal garages such as Union Square move out in more circular patterns.

A few garages such as at the Civic Center, the Russ Building, Lick Place, St. Mary's Square and Portsmouth Square are favored by drivers going to work.

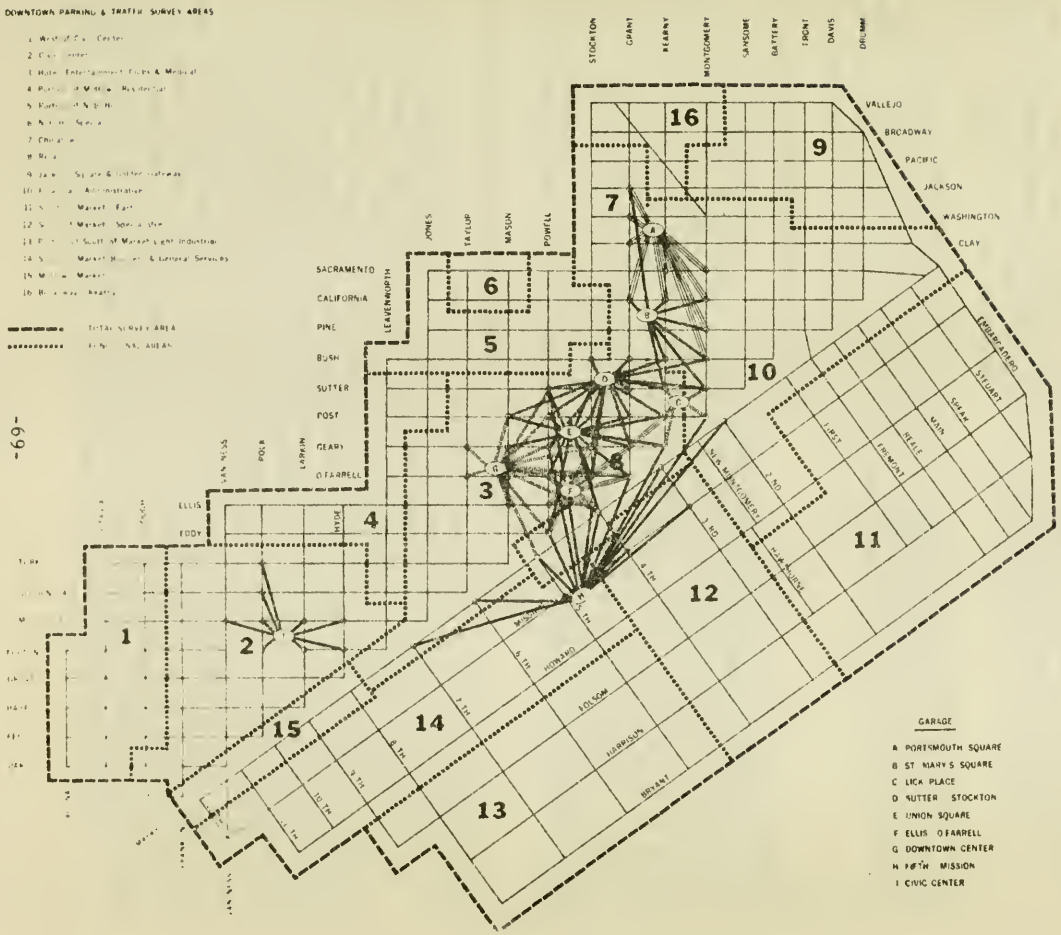


Figure 23

DIRECTIONS WALKED FROM MAJOR GARAGES

Source Downtown Parking and Traffic Survey
Department of Public Works 1965

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The Fifth and Mission, Union Square and Ellis-O'Farrell garages are favored by shoppers. The Sutter-Stockton Garage tends to serve medical and dental facilities downtown as well as retail stores and businesses.

Traffic Generators

The majority of drivers destined for key office buildings such as the Pacific Telephone (New Montgomery Street), Russ, Bank of America, Equitable, Crown-Zellerbach and Insurance Securities Buildings were going to work. Buildings such as the Pacific Gas and Electric Company and Furniture Mart showed more of a balance between workers and business visitors. Some buildings such as the Federal Building, Flood Building and Appraisers Building attracted more business visitors than workers. Shoppers outnumbered workers seven to one in department stores such as Macy's. While the Mark Hopkins and other hotels served as places of residence, they also were destinations for specialized business, social and other purposes.

The relative proportions of trip purposes to these selected buildings as covered by the Downtown Parking and Traffic Survey are shown in Table 33 in the Appendix. These buildings were selected as samples of large office, hotel and retail traffic generators. The data represent destinations of drivers parked within the survey area between 10 a.m. and 6 p.m.

Drivers Crossing Market Street On Foot

The significant relationships between the areas north and south of Market Street are indicated by trips requiring drivers to cross Market Street in the various functional areas. Of the drivers parked in the South of Market Busines Service area, 33 per cent had destinations north of Market Street, and 22 per cent of the South of Market-East parkers and 19 per cent of the South of Market Special Area parkers had destinations north of Market. Approximately 24 per cent of drivers parking in the Retail area and 19 per cent of drivers in the Financial-Administrative area had destinations across Market Street. In the Midtown Market area 61.4 per cent of drivers parking there crossed Market Stree

The Distribution of Parking Supply and Demand

The Downtown Parking and Traffic Survey included estimates of relative demand for parking spaces and usage of on-street and off-street parking facilities throughout the survey area. The structure of the functional areas is clearly marked by analysis of these data, as shown on Figure 24 here in the text. North of Market Street the most intense areas of demand where usage within the area does not equal demand are in the Financial-Administrative and Retail areas, extending up Grant Avenue into Chinatown, along Market Street to the Civic Center, along Geary, Post and Sutter Streets to Taylor Street in the Hotel-Clubs-Medical area and along Montgomery Street to the Jackson Square are This relatively concentrated and continuous "skeleton" of highest demand in terms of destinations is surrounded and penetrated slightly by areas that serv this demand. These supply areas are along Kearny Street, along Clay and Sacramento Streets east of Sansome Street, along O'Farrell, Ellis, Eddy and Turk Streets east to Mason Street, along Pine and Bush Streets to Powell Street, west of the Civic Center and throughout the entire South of Market area, excep' ing the area South of Market close to the Financial-Administrative area.

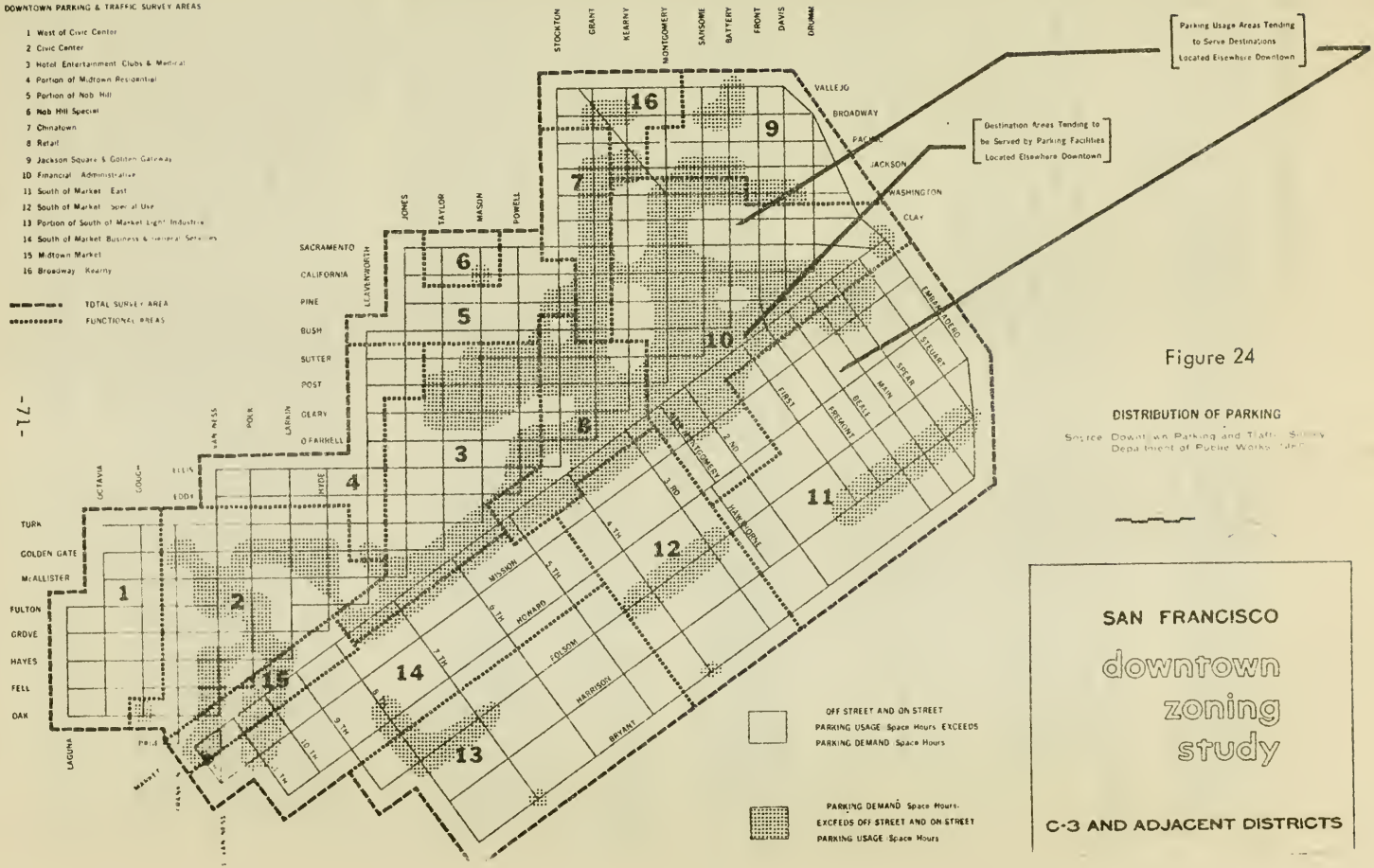

Figure 24

DISTRIBUTION OF PARKING

Source: Downtown Parking and Traffic Survey Department of Public Works 1961

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C-3 AND ADJACENT DISTRICTS

Freight Loading and Unloading

An analysis of trip purposes reveals that approximately 10 per cent of all trips to downtown were recorded for freight loading and 38 per cent of all freight trips recorded had their origin within the downtown survey area. All of these loading trips were across the sidewalks as freight trips to off-street docks were not recorded.

According to the survey the areas are ranked in order of number of freight trip destinations between 10 a.m. and 6 p.m. as follows: (1) Financial-Administrative, (2) Hotel, Entertainment, Medical and Clubs, (3) South of Market Business, (4) South of Market-East, (5) Retail, (6) South of Market Industrial, (7) South of Market Special Use, (8) Chinatown. However on a broad basis 35 per cent of all freight loading and unloading trips are destined for the South of Market areas.

The survey shows that about 47 per cent of the freight trips destined downtown involved a walking distance of less than 50 feet and 24 per cent involved a distance of 50 to 249 feet. Approximately 61 per cent of the freight trips to the South of Market Special Use area involved a walking distance under 50 feet.

Approximately 13 per cent of all commercial vehicles parked 15 minutes or less, 27 per cent parked 240-479 minutes and 17 per cent parked 120-239 minutes. On the other hand, an examination of parking duration for freight handling shows that 58 per cent of the trips lasted up to 15 minutes and 21 per cent lasted 15 to 29 minutes. Thus, 79 per cent of the freight handling parking from 10 a.m. to 6 p.m. took less than one-half hour.

In addition, according to the survey, about 53 per cent of total illegally parked vehicles are commercial cars or trucks. This is significant as commercial vehicles are only 24 per cent of all vehicles in the survey.

In conclusion, approximately 12,000 known trips were made in the survey area from 10 a.m. to 6 p.m. for freight loading or unloading purposes, involving only those trips loading across the public sidewalks. These trips were typically in the morning and short in duration, and vehicles were parked near driver destinations, in many cases illegally. The trips were distributed both north and south of Market Street.

Parking Supply

In Working Paper No. 1 the on-street parking supply in the Downtown Parking and Traffic Survey Area was listed as 11,849 spaces. This supply remains fairly constant depending upon operational policy. Increasing vehicular and pedestrian traffic loading on downtown streets would indicate that this supply will diminish. Off-street spaces have increased significantly, from 22,245 estimated in 1948 to approximately 49,614 in 1965 as indicated in Table 34 in the Appendix. Of this supply approximately 40,000 spaces are commercially available for fee, 2,400 are for private customer use, 4,400 are for private employee use and 2,500 are for government use. The distribution of this parking is shown on Map No. 14 in the Appendix to this paper.

Comparison of data on off-street parking supply with employment and space use data results in the following indices:

2 to 3 employees per off-street parking space in the South of Market areas,
7 to 9 employees per off-street parking space in the Financial-Administrative and Retail areas,
12 to 1400 square feet ofgross building floor space per off-street parking space in the South of Market areas, and
23 to 2600 square feet of gross building floor space per off-street parking space in the Financial-Administrative and Retail areas.

Off-Street Parking Rates

Maps No. 15 and No. 16 in the Appendix indicate hourly and daily parking rate contours in the survey area. Daily rates are highest in the Financial-Administrative, Hotel-Entertainment and Nob Hill areas. Rates decrease concentrically from these areas with an extension of the higher rate areas down Market Street to the Civic Center area. Hourly rates express a similar structure with the exception of the low hourly rates in the Retail area, for the encouragement of shopper parking.

Evening Parking

The Downtown Parking and Traffic Survey made a special study of parking facilities and patterns between the hours of 7:30 p.m. and 1:30 a.m. in four selected areas: North Beach, Chinatown, the Theater District and Nob Hill. The inventory of parking facilities included both off-street parking and on-street parking spaces. On-street spaces were divided into legal and illegal groups.

On a general basis, there were evening peak hour shortages on Nob Hill (8:30 p.m.) and in North Beach (10:30 p.m.). On the other hand, the Theater District peak hour (9:30 p.m.) accumulation and the Chinatown peak hour (9:30 p.m.) accumulation were less than total supply in these areas. Movement into parking spaces was greatest between 7:30-8:30 p.m. Movement out of parking spaces was earliest on Nob Hill (9:30-10:30 p.m.) but generally high in all areas between 11:30 p.m. and 12:30 a.m.

On Nob Hill, the number of parked vehicles from approximately 8:00 to 9:00 p.m. was in excess of the legal supply by about 50 spaces--with off-street spaces operating at almost full capacity and drivers parked in illegal spaces. In North Beach, the peak number of parked vehicles from approximately 9:00 p.m. to 12:00 midnight exceeded the legal supply by up to 116 spaces. The off-street parking operated at 85 per cent capacity at the peak and at the same time there was illegal on-street parking of up to 285 spaces. However, if off-street facilities had operated at 100 per cent capacity, there would still have been a deficiency of spaces.

In Chinatown while off-street spaces were utilized at a maximum of 40 per cent of capacity throughout the evening, on-street illegal spaces were utilized between 7:30 p.m. and 12:30 a.m. to a maximum of 90 spaces. In the Theater District off-street parking operated at 64 per cent of capacity and up to 162 illegal on-street spaces were utilized between 7:30 p.m. and 1:30 a.m.

In conclusion, the night parking survey indicates a critical need for parking supply in the North Beach area, where even assuming high rates of present off-street parking use, additional parking is required for a two to three hour period in the evening. On Nob Hill, the need for additional parking supply is over a shorter peak period of 1 hour and is conditioned by use of the auditorium facility.

C. TRAVEL TO DOWNTOWN BY PUBLIC TRANSIT

The Northern California Demonstration Project, Simpson and Curtin as Consulting Transportation Engineers, studied transit travel to downtown San Francisco. These studies were reviewed and some of the findings are indicated below.

Movement of persons and vehicles into and out of the downtown area is primarily a peak hour problem. Characteristic of the peak is heavy transit use, with 45.7 per cent of the total trips during this period. Peak hour automobile trips into and out of the downtown have slightly declined during the past 6 years as congestion has increased and the length of the peak portion of the day has spread. Transit travel during the peak hour has increased 5.1 per cent while automobile trips have decreased 2.4 per cent. During the peak, local transit has declined slightly, but transit serving out of town areas has more than compensated for this decline with a net increase of over 5,000 passengers during the 5:30-6:30 p.m. peak hour from 1959 to 1965. This increase has been to the major commuting areas of Alameda and Contra Costa Counties, San Mateo County and Marin County, and greatest on the Bay Bridge corridor, where the rate of transit passenger increase is higher than the rate of auto passenger increase for the evening peak. The importance of transit in this corridor to the downtown is indicated by the high proportion (65 per cent) of trans-bay bus trips destined for downtown as related to a much lower proportion (36 per cent) of trans-bay vehicular trips destined for downtown.

Downtown destinations of the total 24,000 trans-bay bus passengers concentrate east of Grant Avenue and Third Streets in the Financial-Administrative area and in the Civic Center. Approximately 58 per cent of the trans-bay transit riders in 1965 walked to their destinations from the transit vehicle, 39 per cent used the Muni and three per cent used other connections. Approximately 20 per cent of riders used the automobile to get to the trans-bay buses. Approximately 14,000 bus trips to downtown originate in San Mateo and Marin Counties.

Approximately 133,000 Municipal Railway passengers were carried to and through downtown daily in 1965 between 7:00 a.m. and 6:00 p.m. Of the total trips destined for downtown 20 per cent originated downtown for work, personal business and shopping purposes. The maximum accumulation of Municipal Railway transit patrons downtown is 58,000 between 1:30-2:00 and an estimated 57,000 riders are outbound in the evening peak from 4:30-6:00 p.m.

Eight out of ten trans-bay transit riders in these surveys had work-related trips and seven out of ten Muni transit riders had work purposes. The distribution of trip purposes is as follows:

DISTRIBUTION OF TRANSIT RIDERS BY TRIP PURPOSE, 1965
Per Cent of Total Trips

	Work	Shopping	Personal Business	Social-Recreational	Other	No Response	Total
AC Transbay	79.5	3.3	6.6	5.8	3.7	1.1	100.0
Muni	69.8	7.5	11.0	4.7	5.5	1.5	100.0
Total	68.5	7.7	11.0	4.7	6.3	1.8	100.0

Two-thirds of transit riders are captive riders, that is, they do not have an automobile available. Of the 80 per cent of AC trans-bay transit riders that do own an automobile, 46 per cent have an automobile available but choose to ride transit.

Transit patronage in the 1960's as reported in the demonstration project has remained stable or increased slightly on the San Francisco Municipal Railway and has increased significantly on the AC Transit trans-bay lines. This has occurred during a time when national trends have indicated a continuing decline in transit riding. The Municipal Railway riding habits are among the highest in the industry following only the Boston and New York transit systems.

The transit study has recommended a comprehensive program for providing complete city-wide transit in relation to the Bay Area Rapid Transit System. One recommendation is an underground transit extension from Montgomery and Market Streets along Post Street in the downtown area, terminating in the Richmond District.

D. DOWNTOWN TRAFFIC FLOWS

Maps No. 11 and No. 12 in the Appendix indicate Twenty-four Hour and Evening Peak Hour Traffic Flows for downtown San Francisco. The twenty-four hour flows are heavy south of Market and on east-west streets north of Market Street. North-south streets in the Financial-Administrative District also experience heavy flows, as does the Van Ness-Polk corridor. The evening peak hour flow is directional, concentrating upon one-way outbound streets and freeway access ramps.

When these flows are related to street capacities, as in Map No. 13 in the Appendix, a congested area is clearly defined where streets are operating near or above capacity. Due to the highly directional nature of evening peak hour traffic displayed in Map No. 13, the patterns of congestion could be expected on inbound streets during the morning hours.

Traffic flows are strongly conditioned by the topography and waterfront location of the downtown area (as indicated on Map No. 3 in the Appendix), the freeway access ramps and the discontinuity of street patterns north and south of Market Street. These physical constraints and the increasing flow of persons to downtown suggest the need for increased separation of pedestrian and vehicular flows and the interception of or diversion of vehicular flow from the congested core areas.

Pedestrian traffic flows are heaviest in the Montgomery Street, Market Street and Union Square areas. These flows are anticipated to increase, especially in the areas around the Powell and Montgomery Street rapid transit stations. The Market Street Design Task Force is studying flows at and near stations and adjacent plazas. The provision of additional pedestrian circulation area, especially in a north-south direction, both north and south of Market Street, is a critical need.

E. PARKING FOR HOTELS

Car Parking Facilities

As part of the Downtown Zoning Study, special interviews were conducted with management of major hotels in the downtown Hotel-Entertainment District to ascertain parking demand and usage. It was found that approximately one-fourth to one-third of the guests of these hotels arrive by car. The percentage varies according to the season and type of guest. A large proportion of guests travel by plane, and it is common practice for businessmen to rent cars at the airport and then proceed to the hotel for a stay of two to three days.

Currently, provision of parking spaces by hotels to accommodate guests and visitors varies from none to about 60 per cent of the number of rooms in the recently constructed Hilton Hotel. The Hilton also has additional parking available in its commercial garage on the premises. Major hotels lacking parking space on the premises have worked out parking arrangements with nearby private garages with varying degrees of success.

Hotels in the area close to Union Square arrange for the use of the public garage for guests and visitors. The guests look for parking connected with the hotel: either in the building or available by pick-up and delivery service. Local visitors to the hotels make use of the on-site facilities or nearby public garages where available, and on-street spaces when the hotel has no parking facilities.

The public dining and meeting rooms attract visitors to the hotels who may well outnumber the registered guests. These visitors may require more parking than the hotel can provide. It is then that the surrounding public garages may be taxed. These conclusions are based upon the knowledge and experience of the hotel personnel.

The inadequacy of present parking arrangements were reflected in the interviews with hotel management. Labor costs make for uneconomic operation of small garages open 24 hours a day. The need for parking facilities has caused management to look for properties on which the hotels themselves might construct garages. To date, land values and assessment policies have deterred construction, according to these sources.

According to the managers interviewed, there is a need for parking facilities in hotels even in the most central areas. Cabs, public transportation and the opportunity to move on foot reduce the quantity of parking required. The major hotel managers in the downtown Hotel-Entertainment District acknowledged a need for parking spaces equal to 25 to 30 per cent of the number of guest rooms.

Off-Street Loading for Hotels

In the Hotel-Entertainment District, no hotel has adequate off-street loading space for handling guest traffic and baggage. Facilities for handling hotel operational loading are usually located on-street with some hotels having sidewalk freight elevators. One hotel has an off-street loading dock and the most recently constructed hotels have some off-street space at garage entrances for unloading passengers and baggage.

The ability to handle traffic appears to depend upon several factors, including the number of entrances to the hotel, the number of streets the building fronts on, and the skill of doormen in handling baggage and dispatching vehicles. Hotel personnel recognize the need to stagger the hours of service traffic so as to minimize interference with guest loading and peak street traffic.

F. PARKING FOR APARTMENTS

The Downtown Parking and Traffic Survey area excluded major portions of the downtown residential areas, and residential parking requirements were not studied. To ascertain these kinds of requirements, separate information was collected in the Downtown Zoning Study. Data from the 1960 Census for San Francisco were analyzed as was a recent survey of automobile ownership throughout areas of the city. Information on large apartment buildings was gathered and interviews were made with the managers of selected buildings in the downtown area. Materials on other cities and standards for off-street parking were also studied.

1960 Census Data on Automobile Ownership

The 1960 Census data were examined for patterns of car ownership in the downtown areas. This information was correlated with size and rental of occupied housing units. In general terms the data by Census Tract indicate that the incidence of car ownership decreases the closer an area is to the center of downtown.

The mean ratio of cars to occupied housing units was 0.26 for the entire downtown area, but as the 1960 Census definition of housing unit includes rooming houses and some hotel rooms, the ratio of cars owned to apartment units is more accurately portrayed by relating to occupied housing units of over one room or to units renting for over $60 per month as reported in the 1960 Census. Investigation for these more meaningful measures indicates car ownership averaged approximately 0.40 cars per occupied apartment unit.

1963 Survey of Automobile Ownership, Trip Generation and Residential Parking

In 1963 the Department of Public Works conducted a survey by mail of selected areas of the city to study the pattern of car ownership, trip generation and residential parking. Within downtown, only parts of Nob Hill were included in the survey. Thirty-six per cent of the households in the Nob Hill-Russian Hill area were estimated to have cars. The ratio was 0.43 cars per household in the Nob Hill-Russian Hill area and 0.89 cars per household for all areas surveyed.

Survey of Parking Facilities for Selected Downtown Apartment Buildings

Information on residential area parking facilities was generally not available from the 1965 Downtown Parking and Traffic Survey which concentrated on commercial areas. Such information was obtained on a sample basis through interviews with owners and managers of major downtown apartment buildings. Use was also made of Department of City Planning files for information relating to number of parking spaces provided in recent buildings.

Only one apartment building of ten or more stories has been constructed in the Downtown Zoning Study Area during the past 30 years without any parking facilities. In all other cases, some parking has been provided, with the relative amounts of parking tending to increase over the years. This has been true for rental units, condominiums and cooperatively owned buildings.

Buildings built prior to the Depression did not provide off-street parking space except those in a luxury class. The older, more modest units now cater more to the elderly or to young working women, the type of tenants who tend to use public transportation or walk. However, even in these buildings up to one-third of the tenants own cars and these are kept on the street, causing congestion on the street, or where available in nearby commercial garages.

The major luxury apartments constructed in the past 30 years in the Nob Hill area have all provided off-street parking, sometimes at ratios exceeding the current zoning requirement of one space per dwelling unit. As the buildings experience full occupancy, certain facts become evident. There is an increasing problem in the provision of space for visitor parking. The need is greatest in the higher income areas and in areas close to restaurants and entertainment facilities.

Other Requirements and Standards for Off-Street Parking

Requirements for residential parking were investigated from several authoritative sources.

The Federal Housing Administration sets standards for buildings and projects for which it insures mortgages. These are considered minimum standards, and where the local requirements are higher such requirements prevail.

Residential units built under FHA requirements must be provided with two kinds of parking. One is to serve the building occupants, the other to serve guests. Standard regulations of the FHA require one space per dwelling unit as parking for occupants and one space for every five dwelling units for guests. Occupant parking for housing for the elderly is three spaces for four dwelling units.

The Federal standards are applied in San Francisco; however, under certain conditions these requirements may be modified. All site planning requirements are examined in a complex index of land use intensity. The land use intensity rating is based on consideration of a combination of land area, floor area, open spaces and parking facilities together with the character of the neighborhood. On this basis parking requirements sometimes may be reduced or substitutions accepted. Thus, consideration may be given to attendant parking, provision for compact cars, and group parking facilities as represented by a public garage or compound.

Banks, insurance companies and other fiduciary institutions do not tend to provide developers with minimum standards as does FHA. However, like FHA these institutions are concerned with the saleability of a property. Among the prime factors lenders in San Francisco consider in apartment development is the provision of parking.

The requirements for off-street parking for residential units set in zoning regulations vary from city to city. In the larger and denser cities there are fractional parking requirements of less than 1.0 space per dwelling unit in the densest commercial zoning district. New York requires 0.4 parking space per dwelling in the densest commercial zoning district for residential parking, Chicago 0.4, Philadelphia 0.5. Historically, it appears that a pioneer in the field of parking standards is the Highway Research Board*. According to this report published 16 years ago, buildings containing more than four units should be provided with parking spaces amounting to three-fourths (75 per cent) of the number of dwellings. For hotels, the recommendation suggests one space for each three rooms plus one space for each five employees.

These standards were refined by the Eno Foundation** ten years ago. The recommendation for apartments with bedrooms is three-fourths to six-tenths (75 to 60 per cent) spaces per dwelling unit. The recommendation for efficiency apartments is one-half to four-tenths (50 to 40 per cent) parking spaces per dwelling unit, and for hotels and clubs it is one space per six guests.

In one of the most recent studies of parking requirements in downtown, Wilbur Smith and Associates*** suggested one to two parking spaces per private residence and 0.7 to 2.0 spaces per multi-family unit. This range was based on parking demands ranging from the low in Philadelphia to the high in Los Angeles. The study indicates that 750 dwelling units in central Philadelphia indicated unit parking demands of 0.58 for high-rise apartments, 0.52 for two to four floor apartments and 1.22 for private houses located close to downtown. The recommendation for Philadelphia multi-family units close-in to downtown was 0.7 spaces per residential unit.

Cost Estimates

In the course of the interviews with building managers, the current sale price of a parking stall was quoted at about $3,500 in a condominium apartment building. Apartment garage rentals ranged from $20.00 to $30.00 per month. Construction costs for garages in residential buildings vary greatly depending upon the scale of the parking, site arrangement and the column spacings necessary for main building support.

Costs for providing parking are finally borne by the tenants. The costs of parking as well as costs for other necessary residential facilities can add substantially to the cost of housing. Policy considerations should take account of this fact in balance with the demonstrated need for residential parking facilities downtown.

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*Highway Research Board, "Bulletin #24," Section 1, 1950, pp. 20 and 31.

**Eno Foundation, Parking-Legal, Financial, Administrative, Saugatuck, Connecticut, 1956, p. 120.

***Wilbur Smith & Associates, Parking in the City Center, New Haven, Conn., 1965, p. 66.

On-Street Parking in Residential Areas

The heavy use of on-street parking in downtown residential areas has produced congestion on the streets. Increasing vehicular traffic through these areas, especially in an east-west direction, will require a lesser use of these streets in the future for parking purposes.

The use of on-street parking to satisfy residential requirements in the downtown area is entirely inadequate. Prevailing densities and densities allowable under present zoning generate more automobiles than can possibly be parked at the curb-side, even recognizing the patterns of automobile ownership in the downtown area. In addition, curb-side space is required for local passenger and freight loading, driveways, fire hydrants and bus zones. Metered zones are required to serve commercial uses. And finally, all types of parking limits are necessary to allow the street to perform its major function of moving vehicles.

Residential Parking Requirements

Regardless of location throughout the downtown area, all residential buildings studied had some parking need. In no case did a building manager state that his tenants owned no cars. Where parking spaces were provided, the ratio of spaces to dwelling units ranged from one space per ten units in older, smaller unit buildings to more than one space per unit in the newer buildings with large units. The ratio of parking spaces to bedrooms ranged from one space per five bedrooms to nearly one space per bedroom. Other data studied also indicated auto ownership and the need for parking in the closest-in areas, although the requirements varied from less than one space for each unit to more than one space per unit depending on location, size of unit and price range.

Apartment buildings in the downtown area provide units that are predominantly small in size. Efficiency or studio apartments and single bedroom units are the most popular. There is sharing of these small apartments and occupancy averages more than one person per bedroom or sleeping room.

Although many residents in the buildings surveyed prefer to use public transit or walk to work or shop, occupancy rates in parking facilities within residential buildings tend to run close to capacity. It was reported that at least half of the garaged cars remain parked during the working day. In most cases, managers of facilities with parking space of less than 30 to 33-1/3 per cent reported need for additional parking.

G. CONCLUDING REMARKS ON PARKING AND TRAFFIC

The movement of persons and vehicles to downtown San Francisco is characterized by a large volume of automotive traffic flowing heavily over a long period of the day to serve work, business and shopping purposes throughout the downtown area. Also characteristic is a more specialized and lesser volume of persons on public transit primarily serving work purposes during peak hours, and also shopping purposes, and with destinations more highly concentrated in the Financial-Administrative, Retail and Civic Center areas. Business visiting trips are primarily automotive and are characterized by a relatively short duration of visit and lesser walking distances between vehicle and destination. In a like manner freight handling trips are of short duration and require a close proximity between vehicle and destination. The origins of trips tend to be on a regional

basis for work purposes, city-wide or regional for shopping and business purposes, and highly localized for freight and sales or service purposes.

The most concentrated areas of intense destinations for transit as well as automotive trips are in the present Financial-Administrative and Retail areas, the close-in Hotel-Club-Medical area and the Civic Center. These areas are served well by transit and have parking facilities primarily on a peripheral basis. Characteristic of the major garages in this area are their peripheral location in relation to the intensive destinations and the directional nature of their service. Within this concentrated area, streets are congested and are operating at or above their practical capacity for both vehicles and pedestrians, with significant conflict between these two modes.

Review of the data and findings from the Downtown Parking and Traffic Survey and from other sources indicates the following downtown parking and traffic needs as they relate to zoning:

a. encouragement of the interception of vehicles by parking belts surrounding the highly concentrated core of the Financial-Administrative, Retail, Hotel and Market Street areas,
b. encouragement of transit use within the above area, especially related to work purposes,
c. discouragement of vehicular use and major parking within this concentrated core area,
d. allowance for limited business parking and freight loading facilities within this area,
e. encouragement of movement of persons at other than street grade to connect to transit facilities and parking facilities, and encouragement of the expansion of second level passageways and plazas,
f. encouragement of provisions for pedestrian continuity and safeguards within these highly concentrated areas,
g. encouragement of sidewalk widening on private property, mid-block passageways and increased pedestrian access to buildings,
h. relation of building intensities throughout downtown to the accessibility patterns created by the forthcoming transit system, the natural topography, and present and projected patterns of street traffic flows,
i. coordination of parcel size, use, intensity and parking requirements characteristic of various areas with programs of public garage construction,
j. requirement of residential parking facilities to satisfy car ownership and residential parking needs in the downtown districts scaled from the 100 per cent requirements in the residential zones to requirements of less than 100 per cent in close-in commercial areas,
k. expansion of off-street loading requirements, where practical, to include office buildings, and
l. location of parking facilities in relation to major access and circulation streets by specified conditions for location of downtown garages.

APPENDIX

MAPS:

1. Existing Zoning
2. Existing Special Height Districts
3. Topographic Map
4. Downtown General Plan Proposals: Functional Areas and Parking Belts
5. Floor Area Ratio by Block, Non-residential Buildings
6. Employment Density by Block
7. Tall Buildings
8. New Construction and Major Alterations
9. Financial-Administrative District Space Capacity Study: Application of Criteria
10. Headquarters Offices
11. Twenty-four Hour Traffic Flow
12. Evening Peak Hour Traffic Flow
13. Traffic Volumes Compared with Street Capacities
14. Off-street Parking Inventory
15. Hourly Parking Rate Contours
16. Daily Parking Rate Contours
17. Open Spaces and Pedestrian Ways

TABLES:

(Tables No. 1 through No. 22 are contained in the Appendix to Working Paper No. 1)

23. Tall Buildings in Downtown San Francisco
24. Downtown San Francisco Office Buildings Exceeding a Floor Area Ratio of 16:1
25. Origin Data by Trip Purpose to Downtown San Francisco
26. Trip Purpose of Drivers Walking to Functional Areas of Downtown San Francisco by Number
27. Trip Purpose of Drivers Walking to Functional Areas of Downtown San Francisco by Percent

TABLES (cont.):

28. Accumulation of Non-commercial Vehicles, 10 A.M. to 6 P.M. in Functional Areas of Downtown San Francisco

29. Walking Distance from Parked Vehicle to Destination for Shopping Trip Purposes, Downtown San Francisco

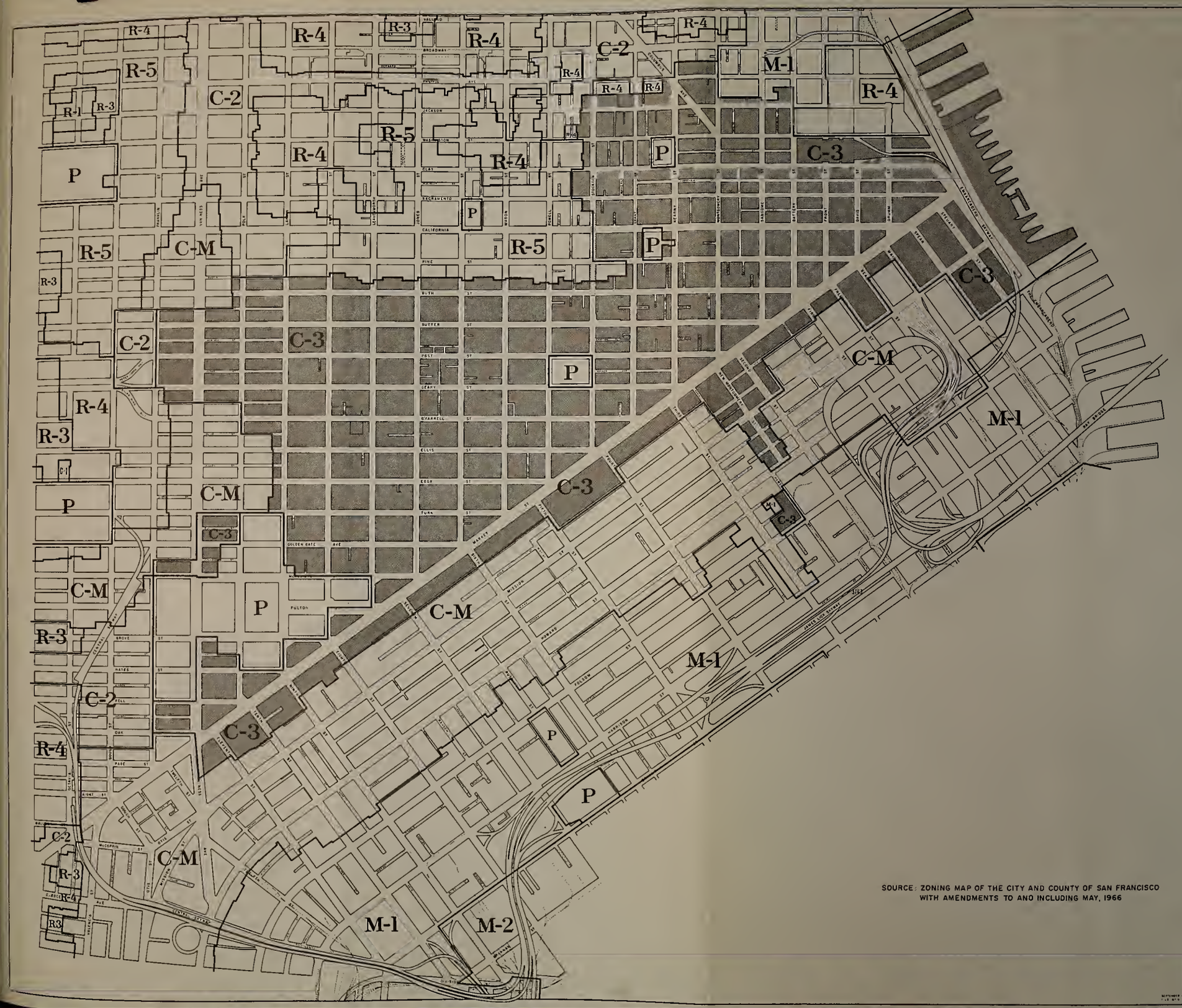
30. Walking Distance from Parked Vehicle to Destination for Work Trip Purposes, Downtown San Francisco

31. Walking Distance from Parked Vehicle to Destination for Business Visiting Trip Purposes, Downtown San Francisco

32. Trip Purpose of Drivers Walking from Selected Garages, Downtown San Francisco

33. Trip Purpose for Drivers Walking to Selected Buildings, Downtown San Francisco

34. Off-street Parking Spaces Available by Functional Areas, Downtown San Francisco



SOURCE: ZONING MAP OF THE CITY AND COUNTY OF SAN FRANCISCO
WITH AMENDMENTS TO AND INCLUDING MAY, 1966

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1

EXISTING ZONING

SCALE IN FEET

0 200 400 600 800 1000

NORTH

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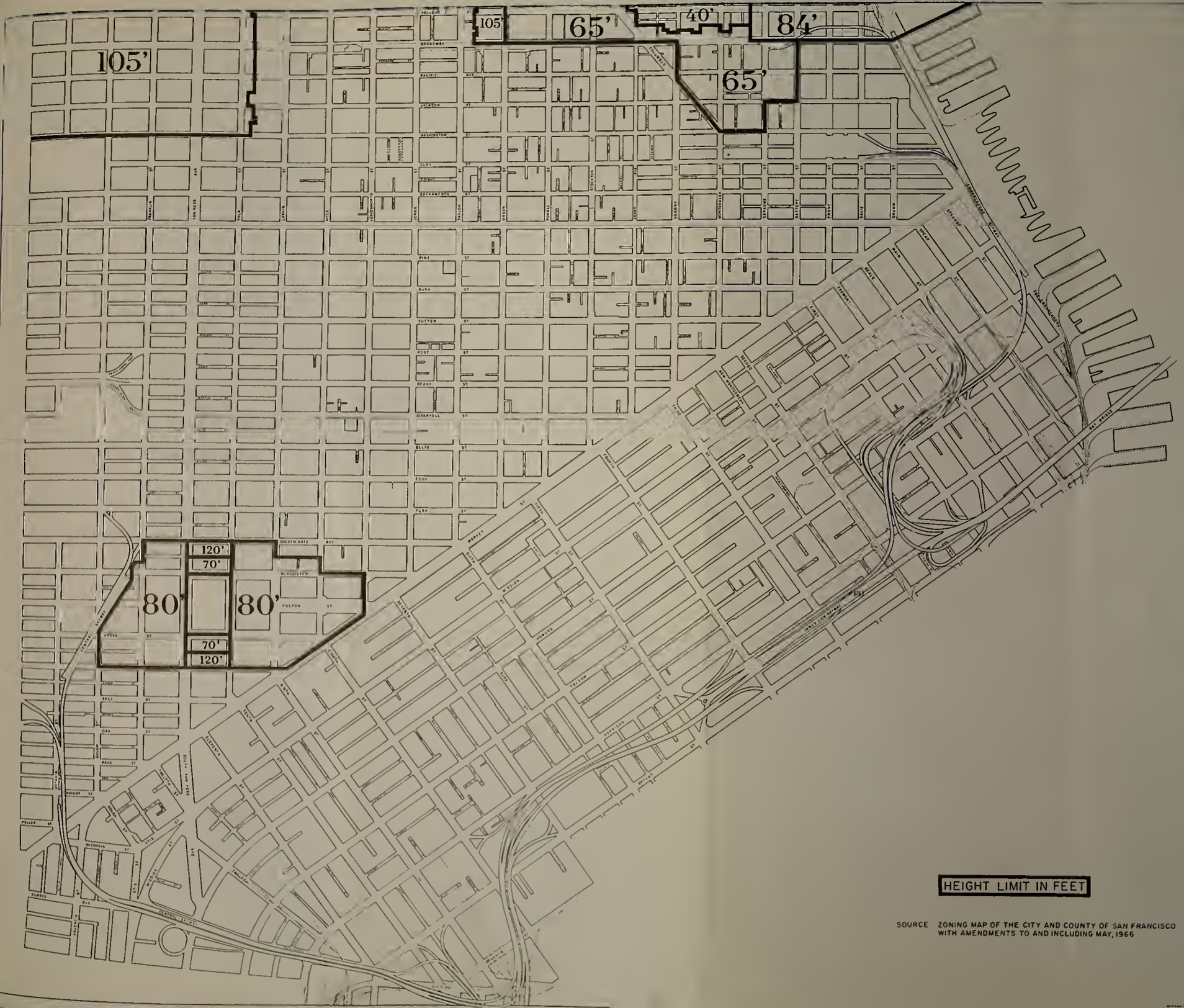

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2

EXISTING SPECIAL HEIGHT DISTRICTS

HEIGHT LIMIT IN FEET

SOURCE ZONING MAP OF THE CITY AND COUNTY OF SAN FRANCISCO WITH AMENDMENTS TO AND INCLUDING MAY, 1966

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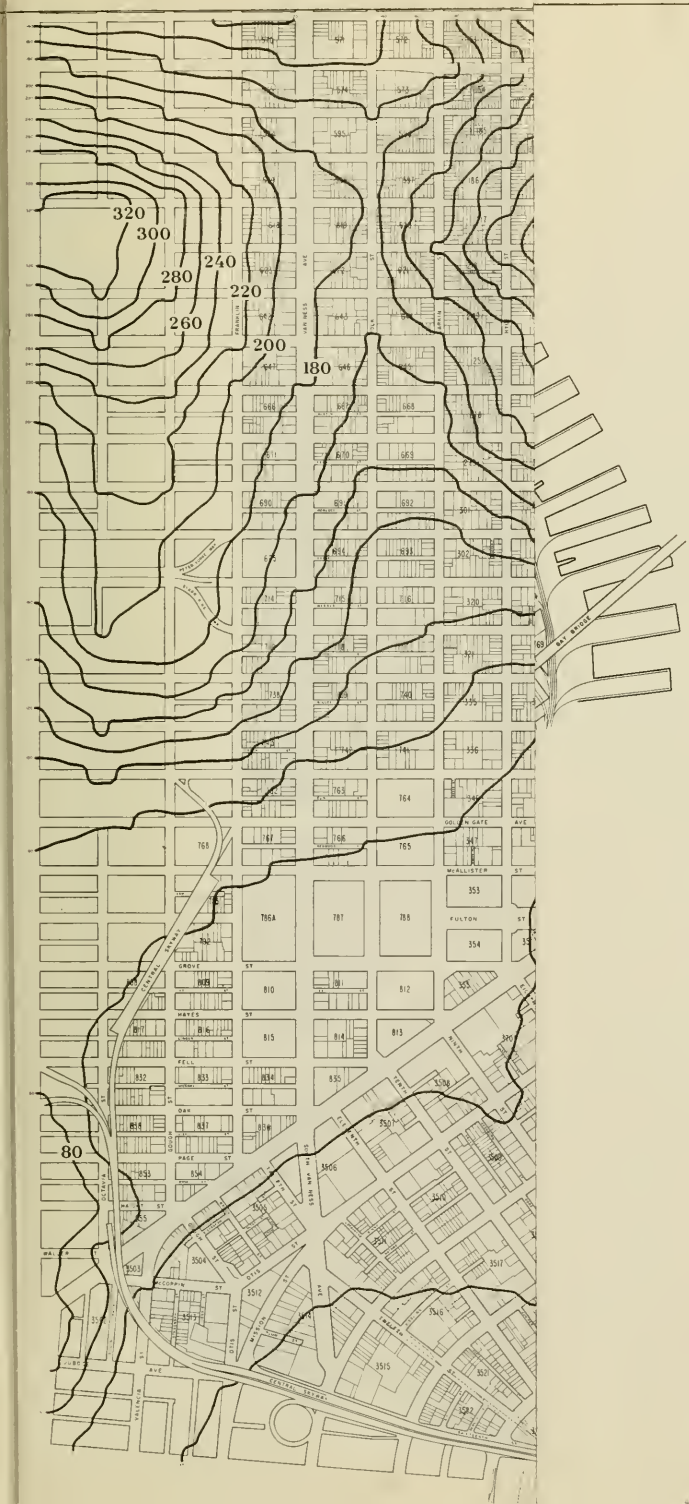

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3

TOPOGRAPHIC MAP

SCALE IN FEET
0 200 400 600 800 1000

NORTH

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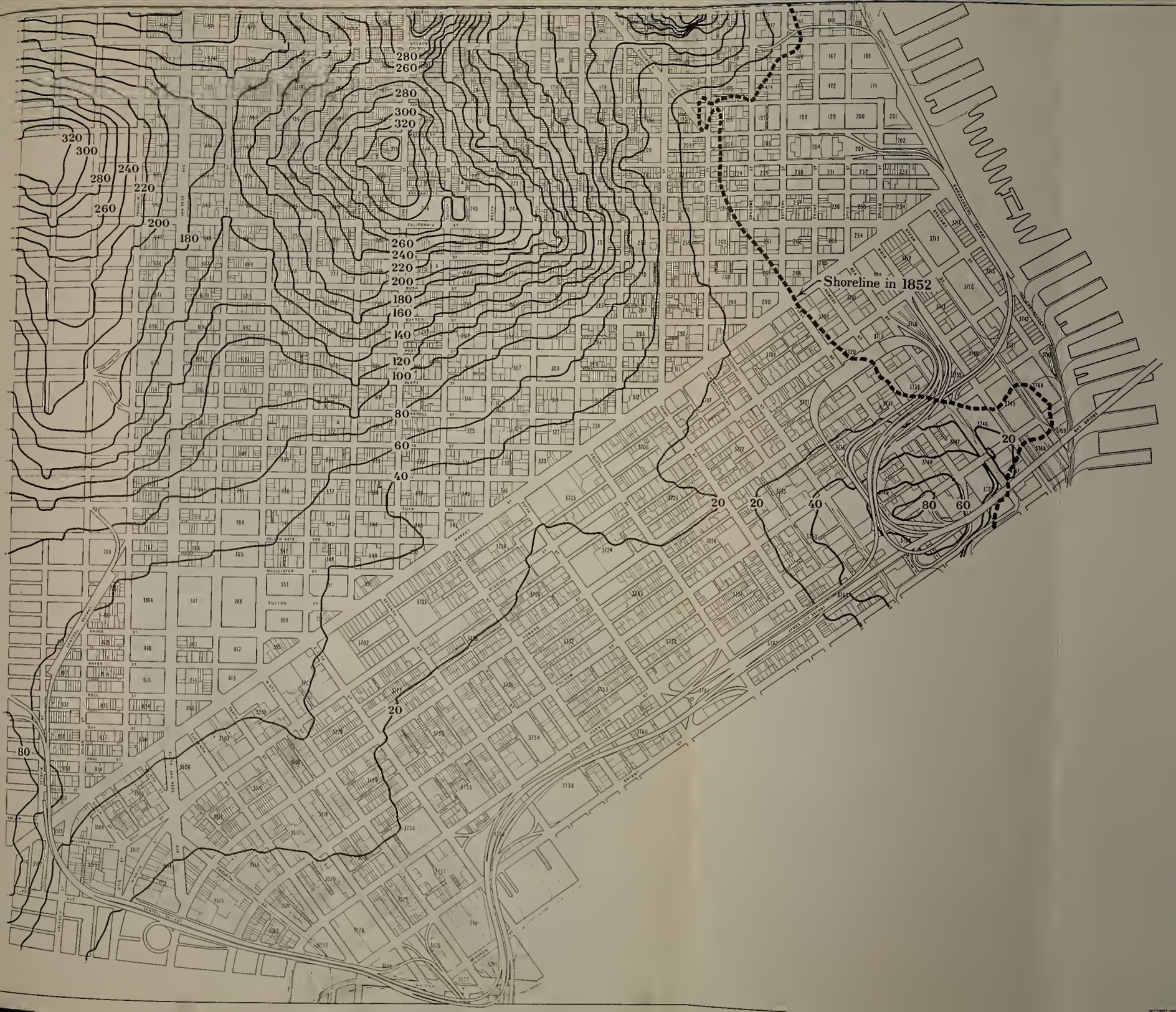

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TOPOGRAPHIC MAP

SCALE IN FEET

0 200 400 600 800 1000

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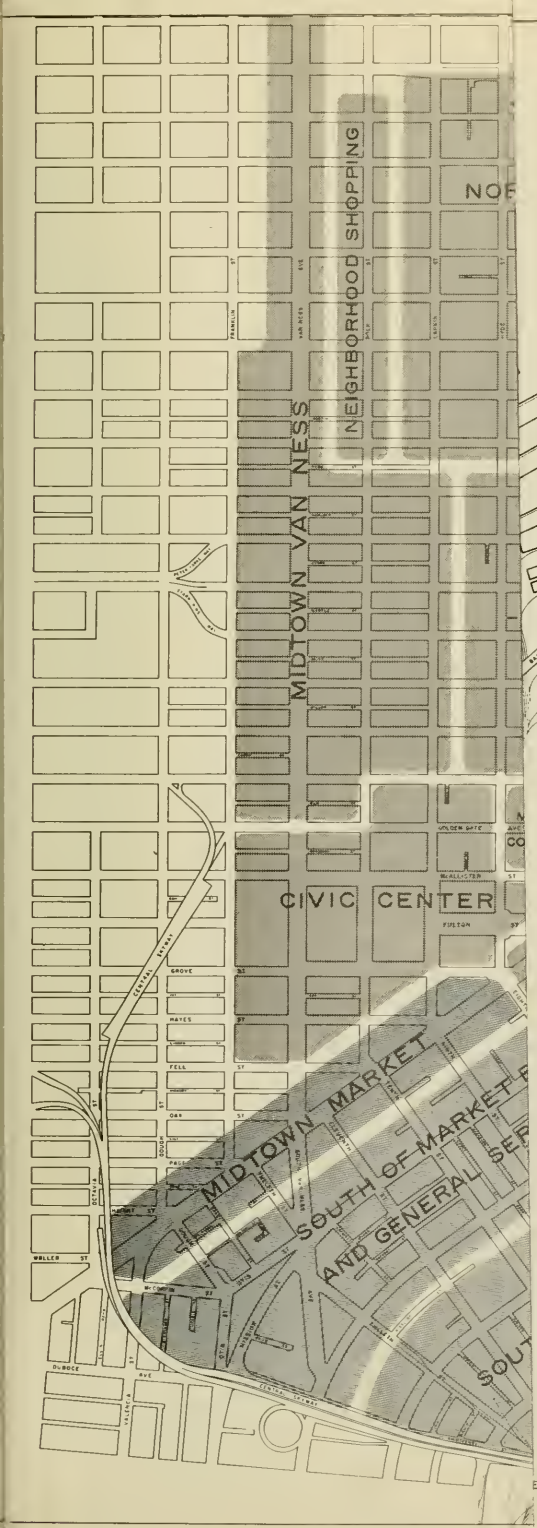

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4

DOWNTOWN GENERAL PLAN PROPOSALS: FUNCTIONAL AREAS AND PARKING BELTS

SCALE IN FEET
0 200 400 600 800 1000

NORTH

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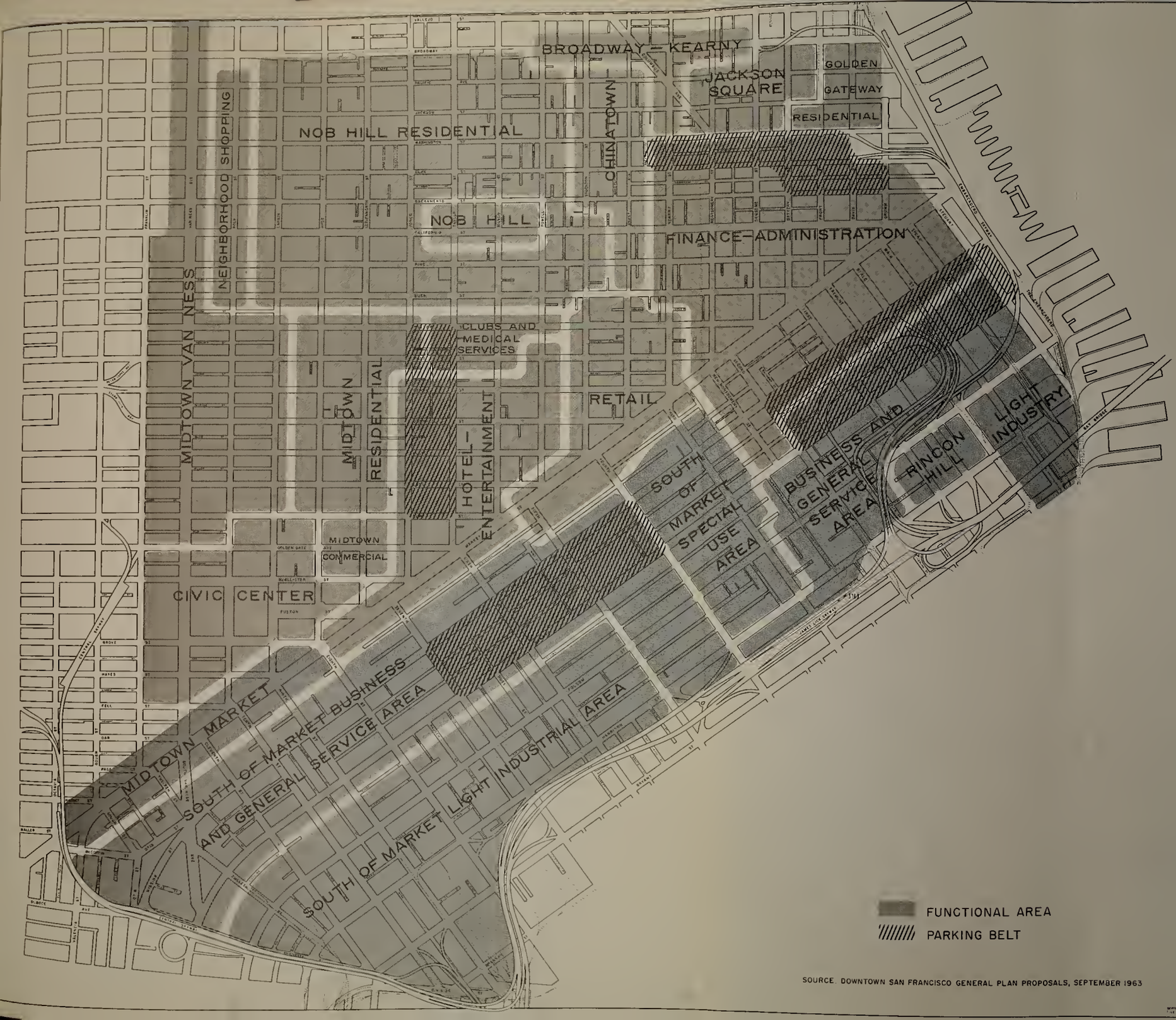
EPTEMBER 1963



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DOWNTOWN GENERAL PLAN PROPOSALS: FUNCTIONAL AREAS AND PARKING BELTS

SOURCE: DOWNTOWN SAN FRANCISCO GENERAL PLAN PROPOSALS, SEPTEMBER 1963

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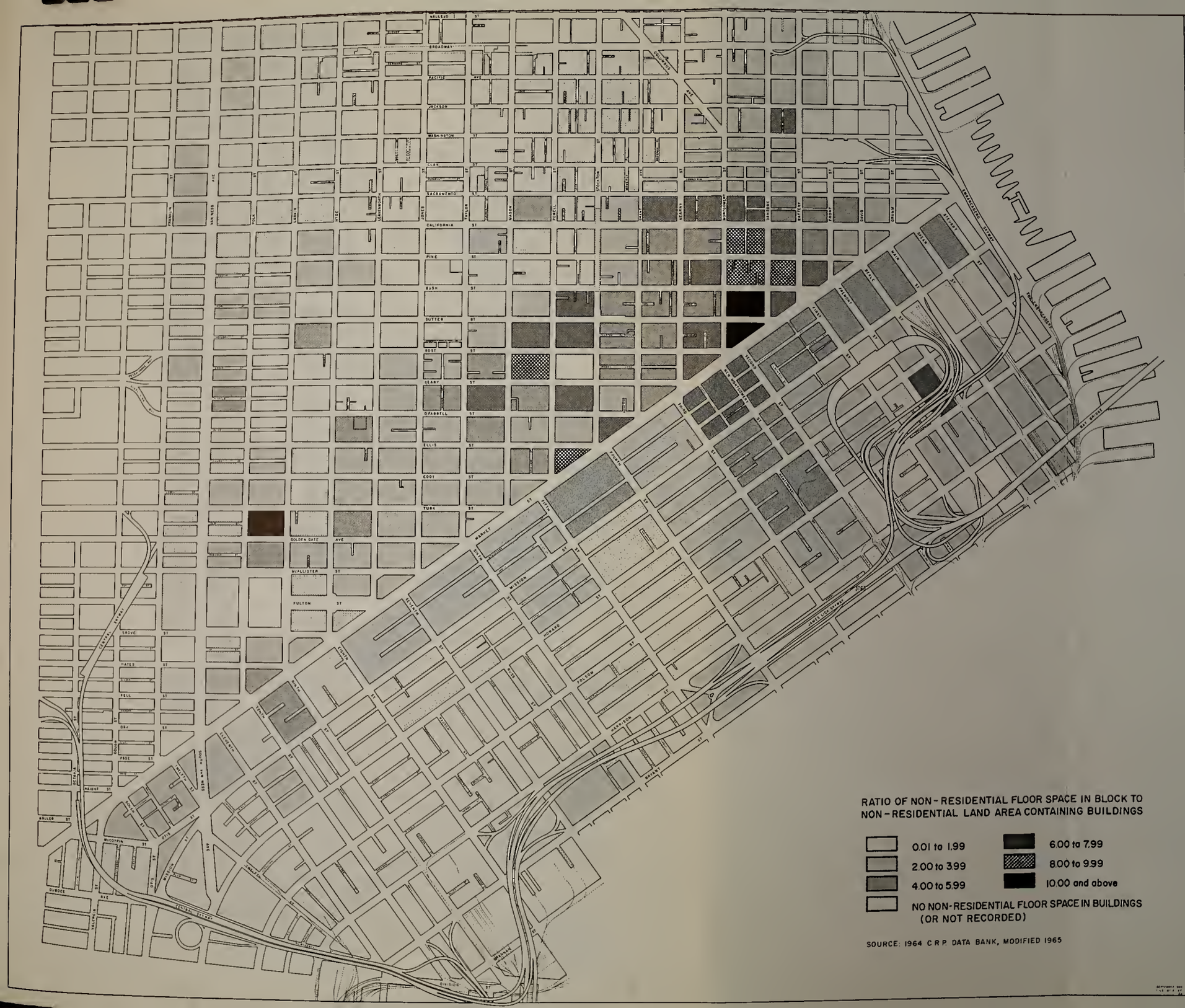

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5

FLOOR AREA RATIO BY BLOCK

NON-RESIDENTIAL BUILDINGS

SCALE IN FEET

0 200 400 600 800 1000

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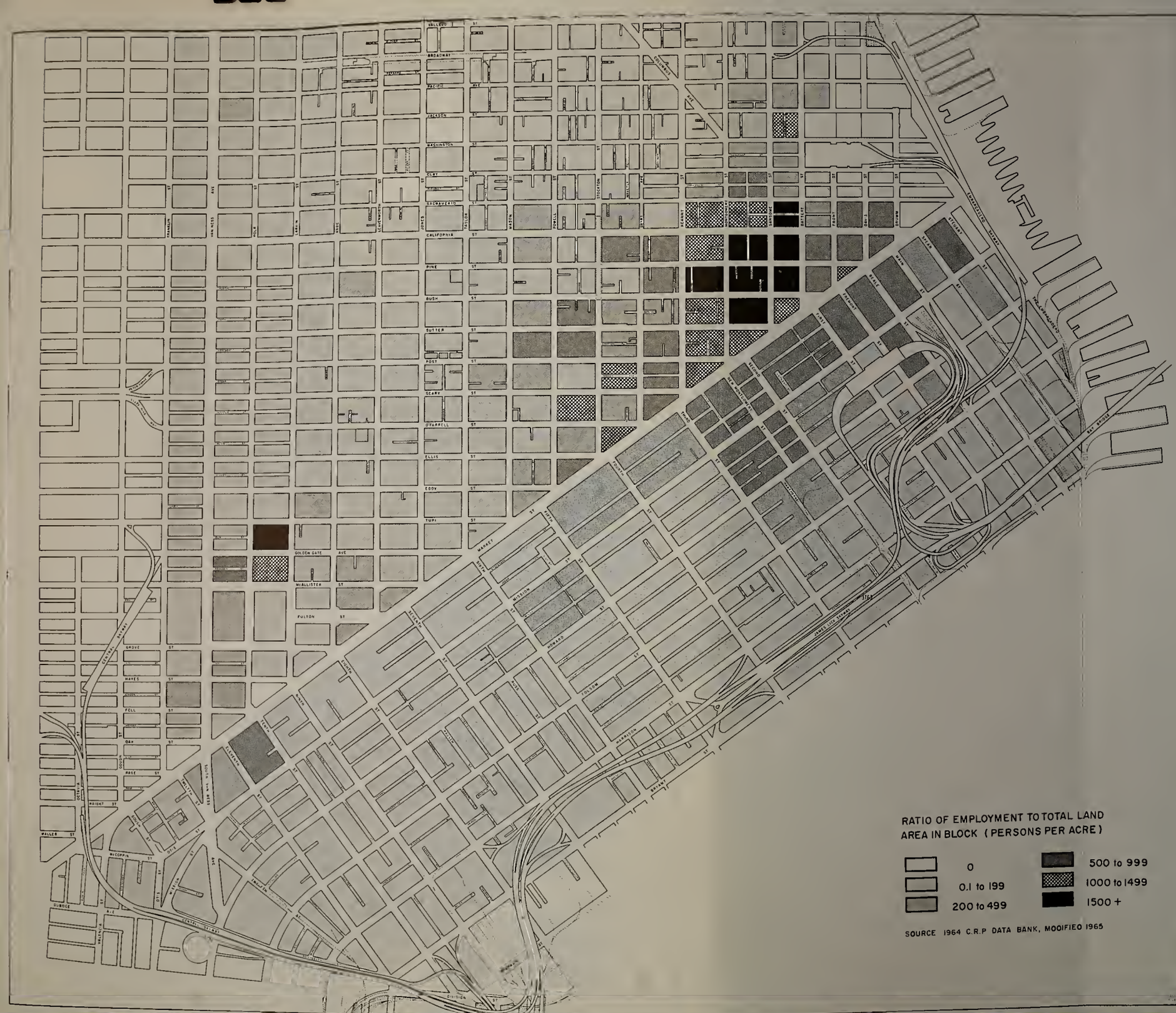

EMPLOYMENT DENSITY BY BLOCK

RATIO OF EMPLOYMENT TO TOTAL LAND AREA IN BLOCK (PERSONS PER ACRE)

- 0
- 0.1 to 199
- 200 to 499
- 500 to 999
- 1000 to 1499
- 1500 +

SOURCE 1964 C.R.P DATA BANK, MODIFIED 1965

SCALE IN FEET
0 200 400 600 800 1000

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TALL BUILDINGS

BUILDINGS OR PORTIONS OF BUILDINGS WITH A HEIGHT OF AT LEAST 118 FEET OR 10 STORIES

SOURCE: SANBORN MAPS; BUILDING PERMIT DATA
DATA: JANUARY 1, 1966

SCALE IN FEET
0 200 400 600 800 1000

NORTH

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NEW CONSTRUCTION AND MAJOR ALTERATIONS

NEW CONSTRUCTION, 1935-1965

PERMITS ISSUED FOR MAJOR ALTERATIONS WHICH MAY SIGNIFICANTLY AFFECT PRESENT CONDITION (EXCLUDES RESIDENTIAL BUILDINGS)
- $10 per sq. ft. and over, January 1, 1946 to June 30, 1955
- $5 per sq. ft. and over, July 1, 1955 to June 30, 1965

SITES OF PROPOSED NEW BUILDINGS, JANUARY, 1966

SOURCE. SANBORN MAPS AND BUILDING PERMIT RECORDS

SCALE IN FEET

NORTH

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FINANCIAL-ADMINISTRATIVE DISTRICT SPACE CAPACITY STUDY:

APPLICATION OF CRITERIA

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HEADQUARTERS OFFICES

● HOME OFFICE OF FIRM WITH ASSETS EXCEEDING 10 MILLION DOLLARS OR MORE THAN 250 EMPLOYEES

○ REGIONAL OFFICE WITH MORE THAN 250 EMPLOYEES

◉◎ BUILDING OWNED BY THIS FIRM

SOURCE: GREATER SAN FRANCISCO CHAMBER OF COMMERCE
DATA: 1964, 1965

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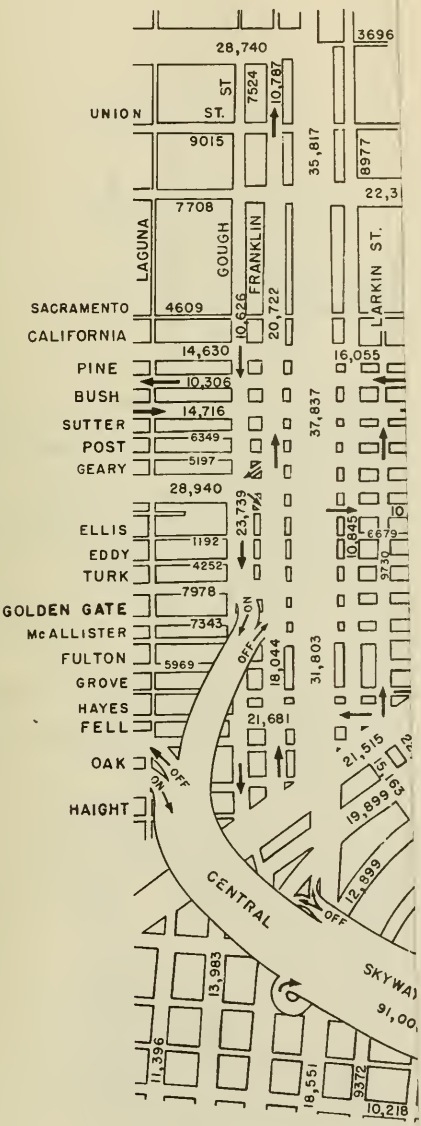

TWENTY-FOUR HOUR TRAFFIC FLOW

RKS, 1963-1965 DATA

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11

60,000 VEHICLES

30,000 VEHICLES

10,000 VEHICLES

SCALE FOR VOLUMES

TWENTY-FOUR HOUR TRAFFIC FLOW

SOURCE: DEPARTMENT OF PUBLIC WORKS, 1963-1965 DATA

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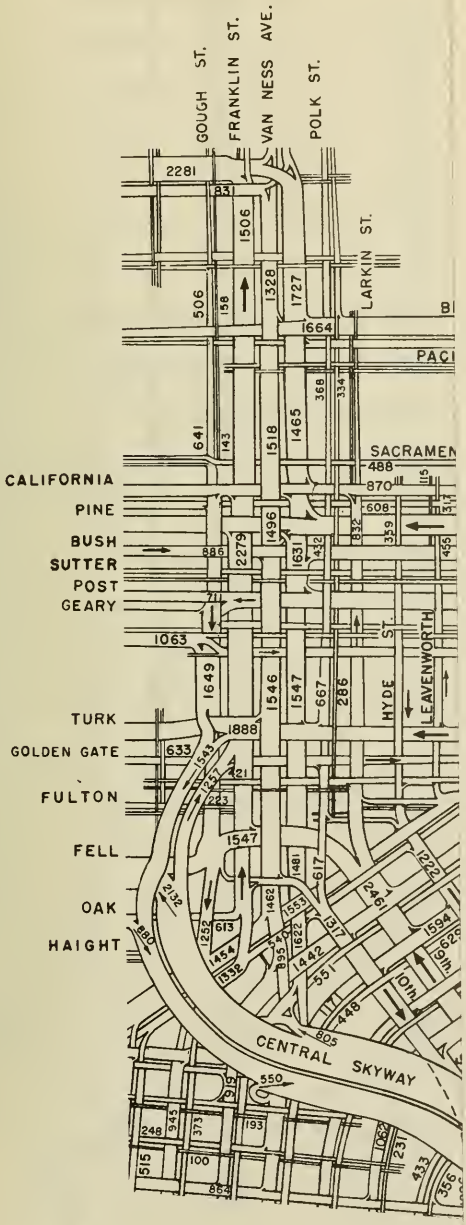

EVENING PEAK HOUR
TRAFFIC FLOW

N FROM
PRIL 18, 1966

WORKS

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ENERAL CONSULTANT
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60,000 VEHICLES

30,000 VEHICLES

10,000 VEHICLES

SCALE FOR VOLUMES

EVENING PEAK HOUR TRAFFIC FLOW

PEAK HOUR COUNTS TAKEN FROM SEPTEMBER 22, 1964 TO APRIL 18, 1966

SOURCE: DEPARTMENT OF PUBLIC WORKS

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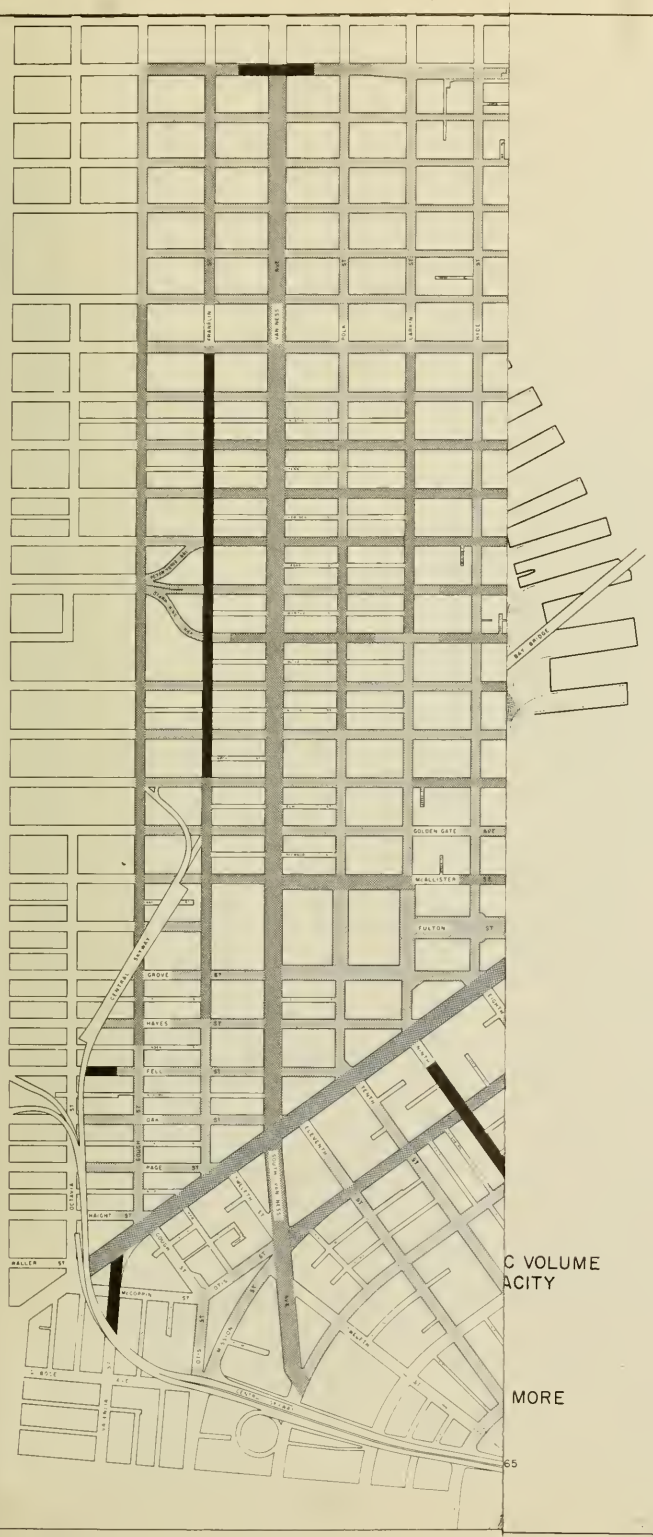

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TRAFFIC VOLUMES COMPARED WITH STREET CAPACITIES

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TRAFFIC VOLUMES COMPARED WITH STREET CAPACITIES

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OFF-STREET PARKING INVENTORY

PARKING LOT

PARKING STRUCTURE OR GARAGE SPACE WITHIN A BUILDING

000 TOTAL OFF-STREET PARKING SPACES IN BLOCK

SURVEY AREA BOUNDARY

SURVEY INCLUDES FACILITIES FOR COMMERCIAL PARKING AND FOR EMPLOYEES, CUSTOMERS AND VISITORS

SOURCE: DOWNTOWN PARKING AND TRAFFIC SURVEY DEPARTMENT OF PUBLIC WORKS, 1966

SCALE IN FEET 0 200 400 600 800 1000

NORTH

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HOURLY PARKING RATE CONTOURS

RATES FOR AUTOMOBILE PARKING IN COMMERCIAL LOTS AND GARAGES

SOURCE: DOWNTOWN PARKING AND TRAFFIC SURVEY
DEPARTMENT OF PUBLIC WORKS, 1965

SCALE IN FEET
0 200 400 600 800 1000

NORTH

SAN FRANCISCO
DEPARTMENT OF
CITY PLANNING

LADISLAS SEGOE
GENERAL CONSULTANT
WALTER F. BOGNER, FAIA
DESIGN CONSULTANT
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downtown zoning study

C-3 AND ADJACENT DISTRICTS

16

DAILY PARKING RATE CONTOURS

RATES FOR AUTOMOBILE PARKING IN COMMERCIAL LOTS AND GARAGES

SOURCE: DOWNTOWN PARKING AND TRAFFIC SURVEY DEPARTMENT OF PUBLIC WORKS, 1965

SAN FRANCISCO DEPARTMENT OF CITY PLANNING

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17

OPEN SPACES AND PEDESTRIAN WAYS

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Table 23:

TALL BUILDINGS IN DOWNTOWN SAN FRANCISCO
(Buildings or portions of buildings with a height of at least 118 feet or 10 stories)

The following list, based upon data to January 1, 1966, covers the area of the Downtown Zoning Study in the order of Assessor's Block numbering. Within each block, the order is counter-clockwise, beginning at the northwest corner of the block. The buildings on this list are shown on a map of Tall Buildings prepared by the Department of City Planning, and contained in Working Paper No. 2 of the Downtown Zoning Study as Map No. 7.

ASSESSOR'S BLOCK NO.	STREET LOCATION	NAME OF BUILDING	NO. OF STORIES	HEIGHT IN FEET	FLOOR AREA RATIO	YEAR BUILT
160	Broadway	Ping Yuen Annex (Public Housing)	11	101	2.5	1960
197	Sansome	Appraisers	19	220	13.0	1941
198	Battery	Richard Henry Dana Apts.	22	221	4.4	1964
199	Jackson	Buckelew House Apts.	25	252	4.4	1964
199	Washington	Macondray House Apts.	25	252	4.4	1964
214	SE Washington & Jones	1360 Jones Apts.	10	120	7.9	1927
214	NE Clay & Jones	Crest Royal Apts.	12	135	8.7	1954
215	Jones	The Comstock Apts.	16	172	9.0	1960
221	SE Clay & Jones	Clay-Jones Apts.	20	231	17.0	1930
222	NE Sacramento & Taylor	Noncomb Apts.	12	126	10.2	1955
222	NW Sacramento & Sproule	Nob Hill Apts. (condominium)	21	208	9.7	1962
222	NW Sacramento & Mason	Park Lane Apts.	10	136	7.4	1925
223	NE Sacramento & Mason	Brocklebank Apts.	10	115	3.3	1925
224	NE Sacramento & Miller	Portola Tower Apts.	21	224	9.8	1963
224	Miller	30 Miller Place Apts.	15	153	9.7	1963

Table 23 - Continued

ASSESSOR'S BLOCK NO.	STREET LOCATION	NAME OF BUILDING	NO. OF STORIES	HEIGHT IN FEET	FLOOR AREA RATIO	YEAR BUILT
228	SE Clay & Montgomery	L. Scatena	10	130	8.8	1909,1931
229	Sacramento	Federal Reserve Bank	(8)	140	5.2	1922,1924
236	Davis	Insurance Securities	14	190	6.8	1959
237	NE California & Battery	S.F. National Bank	11	136	10.3	1910
238	SE Sacramento & Sansome	350 Sansome	10	136	6.0	1952,1959, 1963
238	NE California & Sansome	Alaska Commercial	12	140	11.0	1908
239	NE California & Montgomery	Kohl	11	130	11.0	1909
239	NW California & Leidesdorf	Wells Fargo Bank	12	180	11.9	1958,1960
239	NE California & Leidesdorf	Bank of California	21	314	12.6	1967
239	NW Sansome & Halleck	343 Sansome	13	153	10.1	1908,1930
240	NE California & Spring	550 California	(13 ((9)	165) 118)	8.4	1959
240	NW California & Montgomery	United California Bank	15	201	10.0	1926
240	Montgomery	Richfield	10	130	10.0	1935
241	California	Hartford	33	465	17.8	1964
244	SW Sacramento & Powell	Fairmont Hotel	29	305	5.1	1961
246	California	Grace Cathedral	- -	132(2 towers)) 248(spire)	0.4	1928-1934, 1963
247	NW California & Jones	1200 California Apts.	27	272	9.3	1962
252	SW California & Jones	Cathedral Apts.	16	178	7.6	1926
254	SE California & Taylor	Huntington Hotel	12	160	6.9	1924
255	SE California & Mason	Mark Hopkins Hotel	(14 (19	165) 252)	3.8	1926

ASSESSOR'S BLOCK NO.	STREET LOCATION	NAME OF BUILDING	NO. OF STORIES	HEIGHT IN FEET	FLOOR AREA RATIO	YEAR BUILT
256	Stockton	645 Stockton Apts.	10	120	5.3	1928
257	Pine	Metropolitan Life Ins.	(7)	120 (portion)	4.0	1930
257	California	Metropolitan Life Ins.	(7)	120 (portion)	4.0	1952
258	SW California & Kearny	International	22	325	12.7 (with air rights to south and west)	1961
259	NW Pine & Montgomery	California Commercial Union	(15 (-	228) 309 (tower))	14.6	1921
259	NW Montgomery & Summer	Pacific National Bank (To be razed for Bank of America Bldg.)	18	268	14.5	1930,1937
260	Montgomery	Bank of America	12	182	11.0	1920,1940
260	Pine	Associated Insurance	(9)	122	6.6	1912,1914
260	NW Pine & Sansome	Royal Insurance	11	138	9.7	1909
260	Sansome	233 Sansome	12	164	11.7	1924
260	SE California and Leidesdorf	Insurance Exchange	11	161	7.7	1913
260	SW California & Leidesdorf	Merchants Exchange	15	195	10.4	1904,1906
261	SE California & Sansome	Balfour	15	207	7.4	1920
261	NE Pine & Sansome	American International	16	199	15.7	1927
261	SW California & Battery	Robert Dollar	11	146	8.9	1910,1919, 1928
262	SE California & Battery	John Hancock	15	200	7.4	1959
264	NW Market & Drumm	Fife	12	146	11.0	1907,1916

Table 23 - Continued

ASSESSOR'S BLOCK NO.	STREET LOCATION	NAME OF BUILDING	NO. OF STORIES	HEIGHT IN FEET	FLOOR AREA RATIO	YEAR BUILT
266	NE Bush & Battery	Union Carbide & Carbon	11	126	7.2	1908,1925
266	SW Pine & Front	111 Pine	19	250	18.3	1965
267	SE Pine & Sansome	Hong Kong Bank	19	247	12.0	1965
267	NE Bush & Sansome	Adam Grant	14	192	10.2	1907,1924, 1926
267	Bush	Sirigo	11	120	9.3	1910
267	NW Bush & Battery	Shell	(10 (29	137) 376)	18.3	1930
268	NE Bush & Montgomery	(Mills Building ((	10	154)))	10.1	(1892,1907, (1914 (
268	NW Bush & Treasury	(Mills Tower	22	302)		(1930
268	NW Bush & Sansome	200 Bush	12	176	10.2	1912
268	Sansome	Industrial Indemnity	12	178	12.0	1929
269	Montgomery	Russ	(16 (31	210) 408)	15.7	1926
270	SE Bush & Quincy	Pacific Telephone & Telegraph	(7)[1]	120[1]	5.8[1]	1959
271	Pine	Imperial Apts.	10	122	7.5	1927
273	SE Pine & Mason	899 Pine Apts.	19	185	6.8	1961
275	SW Pine & Taylor	Pine Terrace Apts. (condominium)	14	135	7.1	1964
279	NW Sutter & Hyde	Granada Hotel	10	120	8.5	1909
279	Bush	1257 Bush Apts.	12	105	6.9	1965
280	NW Sutter & Leavenworth	805 Leavenworth Apts.	10	130	7.3	1924

[1] To be expanded in 1966 to 16 stories and 290 feet, total F.A.R. 9.2

Table 23 - Continued

ASSESSOR'S BLOCK NO.	STREET LOCATION	NAME OF BUILDING	NO. OF STORIES	HEIGHT IN FEET	FLOOR AREA RATIO	YEAR BUILT
282	Sutter	Canterbury Hotel	10	102	9.0	1922
284	Mason	Alta Apts.	12	122	8.3	1926
285	Sutter	450 Sutter	26	315	12.0	1929
286	SW Grant & Harlan	Baldwin Hotel	10	120	10.0	1911
287	NW Sutter & Claude	W. & J. Sloane	(8)	132	7.2	1909
287	SW Bush & Mark	Pacific Telephone & Telegraph	(9)	140	9.0	1905,1906
288	NE Kearny & Hardie	Keil	10	119	9.5	1906
288	Sutter	130 Sutter	(7)	130	5.0	1917
288	NW Sutter & Trinity	French American	10	104	9.5	1902,1906
288	NW Sutter & Montgomery	Cal-Pacific	11	112	11.8	1912
288	SW Bush & Montgomery	Alexander	15	196	15.0	1921
289	NE Sutter & Montgomery	Equitable	(15 (25	196) 320)	18.0 with air rights to north	1955
289	SW Bush & Sansome	Standard Oil	22	308	16.7	1921,1948
290	Bush	Crown-Zellerbach	20	288	5.9	1959
291	SE Sutter & Montgomery	Wells Fargo	43	561	23.9	1966
291	Market	Hobart	(12 (20	169) 263)	7.2	1914
291	NW Market & Sansome	Flatiron	10	120	10.0	1909
292	NW Post & Montgomery	Crocker-Citizens	13	168	5.6	1907

Table 23 - Continued

ASSESSOR'S BLOCK NO.	STREET LOCATION	NAME OF BUILDING	NO. OF STORIES	HEIGHT IN FEET	FLOOR AREA RATIO	YEAR BUILT
292	SW Sutter & Montgomery	111 Sutter	24	308	16.2	1926
293	SE Sutter & Grant	The White House(one bldg. only)	(5)	120	6.0	1909,1918
293	SW Sutter & Kearny	Argonaut	10	126	10.0	1907
294	Stockton	Drake-Wiltshire Hotel	16	172	10.5	1913
294	NW Post & Grant	Shreve	11	140	10.6	1905,1906
295	SE Sutter & Powell	Sir Francis Drake Hotel	(15 (23	193) 286)	15.7	1928
295	NE Post & Powell	Fitzhugh	10	135	4.8	1923
296	NE Post & Mason	Medical-Dental	16	190	12.8	1925,1928
296	Post E of Mason	Elks	12	180	11.9	1923
296	Post W of Powell	Chamberlain	10	120	7.1	1925
296	Powell	Hotel Chancellor	15	185	13.5	1915
297	SW Sutter & Mason	Marines Memorial	11	197	9.5	1926
298	NW Post & Ophir	Crown Towers Apts.	15	157	13.0	1926
304	Post	Maurice Hotel	16	192	10.4	1930
305	NE Jones & Maggie	Gaylord Hotel	12	120	12.0	1929
305	NW Geary & Shannon	El Cortez Hotel	16	150	13.0	1929
307	Mason	N.S.G.W.	(8)	120	7.6	1912
307	NE Geary & Mason	Fielding Hotel	12	150	11.3	1908

ASSESSOR'S BLOCK NO.	STREET LOCATION	NAME OF BUILDING	NO. OF STORIES	HEIGHT IN FEET	FLOOR AREA RATIO	YEAR BUILT
307	Geary	Hotel Franciscan	11	120	2.6	1905,1906
307	Powell	St. Francis Hotel	13	186	12.0	1903-1914
309	NE Stockton & Maiden Lane	T.W.A.	10	136	10.8	1907
309	Geary E of Stockton	Whittell	16	180	15.0	1907
309	Geary W of Grant	Sachs	10	132	9.6	1908
309	SW Post & Grant	Howard	12	166	11.6	1909
309	Post	Ransohoffs	(8)	120	8.0	1909
310	Post	177 Post	((9) (10	126) 142)	9.3	1908
311	NE Geary & Kearny	De Young	(12 (16	140) 210)	12.8	1890,1907 1964
311	NW Market & Montgomery	Crocker	11	154	10.1	1892,1907
311	Post	Mechanics Institute	(9)	118	9.0	1909
312	SE Geary & Grant	H. Liebes	((7) ((8)	120) 134)	7.1	1929
312	SW Geary & Kearny	Citizens Federal Savings & Loan	(11 (11	191) 181)	11.0	(1902,1907 (1964
313	NW O'Farrell & Savings Union	20 O'Farrell	10	122	10.0	1909
314	NW O'Farrell & Stockton	Macy's	((9) ((8)	132) 118)	8.6	(1928-1947 (1948
314	SW Geary & Stockton	I. Magnin	(9)	142	9.3	1947

Table 23 - Continued

ASSESSOR'S BLOCK NO.	STREET LOCATION	NAME OF BUILDING	NO. OF STORIES	HEIGHT IN FEET	FLOOR AREA RATIO	YEAR BUILT
316	SE Geary & Taylor	Hotel Clift	(14 (16	176) 210)	13.6	1913-1925
317	NW O'Farrell & Taylor	Hotel Californian	16	170	13.3	1924
317	SE Geary & Shannon	Geary Apts.	10	106	9.8	1922
318	Leavenworth	Louard Apts.	11	116	8.0	1925
320	Geary	Castle Apts.	13	132	10.4	1927
321	Hyde	455 Hyde Apts.	12	120	8.4	1926
322	O'Farrell	Alexander Hamilton Apts. (condominium)	(12 (18	126) 196)	8.2	1930
323	O'Farrell W of Jones	Beverly Apts.	12	128	5.2	1926
323	O'Farrell E of Leavenworth	El Capitan Apts.	12	126	8.3	1927
325	Mason	Hilton Hotel	(14 (17	169) 207)	7.6	1963
328	NW Market & Grant	Phelan	11	138	11.8	1907
329	Powell	Flood	12	160	11.6	1904,1906
330	NW Eddy & Powell	Bank of America	(8)	134	8.0	1920
330	Ellis	Hotel Willard	12	130	10.0	1904,1906
332	Eddy	Olympic Hotel	12	146	10.0	1927
337	Eddy & Turk	Midtown Terrace Apts.(2 bldgs.)	15	152,156	7.1	1964
338	Turk	El Cerrito Apt. Hotel	10	120	7.5	1927

ASSESSOR'S BLOCK NO.	STREET LOCATION	NAME OF BUILDING	NO. OF STORIES	HEIGHT IN FEET	FLOOR AREA RATIO	YEAR BUILT
339	NE Turk & Jones	Hotel Governor	10	114	7.5	1925
343	NW Golden Gate & Taylor	Golden Gate Theater (tower)	12	145	2.7	1922
345	Turk	Y.M.C.A. Hotel	(12 (14	130) 150)	4.4	1923
348	NW McAllister & Leavenworth	U.S. Government Offices	(13 (20 (27	164) 234) 308)	13.9	1928
349	Golden Gate	St. Boniface Church	-	150 (spire)	2.0	1908
599	SE Jackson & Franklin	Jackson Towers Apts.	12	105	9.2	1965
618	NE Clay & Franklin	Clay Park Towers Apts.	10	120	8.4	1963
695	SE Post & Franklin	Jack Tar Hotel (office portion)	11	140	3.4	1958
716	Geary	Hotel President	11	116	9.4	1927
764	Turk	U.S. Government Offices	20	290	10.7	1963
786A	Franklin	S.F. Opera House	-	146 (stage loft)	1.6	1931
787	Polk	City Hall	-	157,219,350 (dome)	2.0	1915
812	Grove	Civic Auditorium	-	120 (dome)	2.5	1914
813	Polk	Fox Plaza (offices and apts.)	29	354	9.9	1966

Table 23 - Continued

ASSESSOR'S BLOCK NO.	STREET LOCATION	NAME OF BUILDING	NO. OF STORIES	HEIGHT IN FEET	FLOOR AREA RATIO	YEAR BUILT
814	Hayes	California State Automobile Association (portion)	(8)	120	6.1	1958
3506	South Van Ness	Bank of America Data Processing Center (penthouse)	10	132	7.8	1960
3508	SW Market & Ninth	Merchandise Mart (portion)	(10 (11 (11	122) 134) 144)	8.3	1946,1955, 1948
3704	SE Market & Sixth	Hewes	15	190	8.3	1908,1962
3704	SW Fifth & Stevenson	J.C. Penny Warehouse	10	130	10.1	1925
3705	Market (center of block)	Emporium (portion)	(7)	120	3.2	1908,1917
3705	Market W of Fourth	Commercial (portion)	11	120	5.0	1908
3705	Market W of Fourth	Pacific (penthouse)	12	141	8.5	1907
3706	Fourth	U.S. Government Offices	11	125	5.9	1925
3706	NW Mission & Third	Mercantile Center	10	132	9.2	1906
3706	SW Market & Third	Central Tower	23	296	11.6	1897,1908, 1938
3706	Market	Humboldt	(14 (18	172) 242)	11.6	1907
3707	SE Market & Third	Examiner	13	152	10.7	1909
3707	Mission	Atlas	11	120	7.2	1906
3707	SW Market & Second	West Coast Life	14	174	14.9	1917,1922

ASSESSOR'S BLOCK NO.	STREET LOCATION	NAME OF BUILDING	NO. OF STORIES	HEIGHT IN FEET	FLOOR AREA RATIO	YEAR BUILT
3707	SE Market & New Montgomery	Bank of America	14	154	6.9	1907
3707	SW Market & Annie	Monadnock	10	116	8.9	1906
3708	SE Market & Second	Balboa	10	132	5.2	1906
3708	NE Mission & Second	85 Second St.	(8)	118	6.3	1907
3708	SW Market & First	Cunard	10	110	10.0	1908
3708	Market	Standard Oil	22	301	7.3	1964
3711	SE Market & Beale	Pacific Gas & Electric	(13 (14 (17	182) 212) 250)	9.5	1925,1948
3711	SW Market & Main	Matson	(16 (-	226) 257 (tower))	6.9	1921
3713	Market	Southern Pacific	(11 (14	151) 197)	4.3	1917
No Number	The Embarcadero	Ferry Building	-	235 (tower)	2.5	1894
3715	The Embarcadero	Y.M.C.A. (tower)	10	116	3.9	1925
3722	New Montgomery	Pacific Telephone & Telegraph	(27 (30	382) 418)	8.4	1924
3723	SW Mission & Third	Rochester	10	124	8.4	1907
3735	NW Folsom & Hawthorne	Pacific Telephone & Telegraph	13	200	9.4	1964

Table 23 - Continued

ASSESSOR'S BLOCK NO.	STREET LOCATION	NAME OF BUILDING	NO. OF STORIES	HEIGHT IN FEET	FLOOR AREA RATIO	YEAR BUILT
3744	Main	Hills Bros. Coffee (two towers)	((8) (12	134) 156)	2.1	(1952 (1924
3764	Second	Schmidt Lithograph (tower)	10	180	2.7	1900-1928
3765	First	Union Oil Co. of California (tower)	11	221	2.5	1955
Under construction, June 1966; not listed above and not mapped.						
200	Davis	William Heath Davis Apts.	22	220	4.4	1966
204	Clay	Alcoa	27	279	5.0	1967
229	SE Clay & Sansome	Insurance Center	16	220	13.0	1967
3710	NW Beale & Mission	Bechtel	23	327	14.0	1967
3712	NW Spear & Mission	Matson	13	184	10.5	1967

Table 24: DOWNTOWN SAN FRANCISCO OFFICE BUILDINGS EXCEEDING A FLOOR AREA RATIO OF 16:1

Name of Building	Date of Completion	FAR Limit Under Which Built	No. of Stories	Actual FAR of Building	FAR now Permitted for Site (16:1 with Corner and Through Lot Bonuses)	Amenities Offered by Building
Hartford	1964	20:1	33	17.8:1	16.02:1 (through lot)	Less than 100 % coverage; Arcade.
111 Pine	1965	20:1	19	18.3:1	19.6:1 (corner)	Arcade.
Shell	1930	none	29	18.3:1	19.5:1 (corner)	Tower at upper stories.
Equitable	1955	none	25	18.0:1 (with air rights to north)	19.0:1 (corner)	Less than 100% coverage at upper stories.
Standard Oil (Bush Street)	1921,1948	none	22	16.7:1	17.6:1 (corner)	Less than 100% coverage.
Wells Fargo	1966	20:1	43	23.9:1	19.1:1 (2 corners)	Transit access; Arcade; Less than 100% coverage at upper stories.
111 Sutter	1926	none	24	16.2:1	19.1:1 (corner)	Tower at upper stories.
Building permit applications approved by Department of City Planning, June 1966.						
Bank of America	1969	16:1	52	17.7:1 [1]	18.5:1 [1] (4 corners, through lot)	Plaza; Arcades; Pedestrian walk-throughs; Low coverage.
First Savings	1968	16:1	26	19.6:1 [1]	19.6:1 [1] (corner)	Less than 100% coverage.

[1] Including an existing building on site which will remain.

Table 25 : ORIGIN DATA BY TRIP PURPOSE TO DOWNTOWN SAN FRANCISCO Part I

Trip Purpose	Zones of Origin					
	Percent Inside San Francisco					
Zone Designation:	Downtown 1	Nob Hill - North Beach 2	Northwest San Francisco 3,4,5	Southwest San Francisco 6,8,9	Southeast San Francisco 7	Total San Francisco
Shopping	20	7	17	15	10	69
Business Visiting	27	6	14	12	11	70
Work	14	4	13	17	9	57
Sales or Service	39	8	12	9	13	81
Freight Loading/Unloading	54	8	7	5	16	90
Passenger Loading/Unloading	35	7	16	13	13	84
Medical - Dental	12	5	17	18	12	64
Social	25	8	15	10	9	67
Home	37	7	13	6	10	73
Miscellaneous & Unknown	27	7	14	12	12	72
TOTAL	25	6	14	13	10	68

SOURCE: San Francisco Downtown Parking and Traffic Survey conducted by the Department of Public Works, 1965.

Table 25: ORIGIN DATA BY TRIP PURPOSE TO DOWNTOWN SAN FRANCISCO Part II

Trip Purpose	Zones of Origin: Percent Outside San Francisco				Total Origins[1]		
Zone Designation:	East Bay 11,15,16	Peninsula - San Jose 10,13,14	Marin - Santa Rosa 12,17	Outside Bay Area 18,19	Number	% of Purposes	% of Total Trips
Shopping	11	13	5	2	9,718	100	9
Business Visiting	11	13	4	2	28,448	100	26
Work	14	18	10	1	36,777	100	34
Sales or Service	7	8	3	1	5,304	100	5
Freight Loading/Unloading	5	4	1	0[a]	8,769	100	8
Passenger Loading/Unloading	6	7	2	1	3,602	100	3
Medical - Dental	10	17	7	2	1,734	100	2
Social	11	13	4	5	4,918	100	4
Home	7	10	3	7	3,200	100	3
Miscellaneous & Unknown	9	11	4	4	6,721	100	6
TOTAL	11	13	6	2	109,191	100	100

1/ Represents known origins, approximately 71 percent of drivers parked within the survey area between 10:00 a.m. and 6:00 p.m.

a/ Less than 0.5 percent

SOURCE: San Francisco Downtown Parking and Traffic Survey conducted by the Department of Public Works, 1965.

Table 26: TRIP PURPOSE OF DRIVERS[1/] WALKING TO FUNCTIONAL AREAS OF DOWNTOWN SAN FRANCISCO BY NUMBER Part I

Trip Purpose	Functional Areas								
	West of Civic Center	Civic Center	Hotel, Entertainment, Clubs, Medical	Portion Midtown Residential	Portion Nob Hill Residential	Nob Hill	China-town	Retail	Jackson Sq.& G. Gateway Residential
Shopping	256	147	1134	231	63	18	1054	4260	111
Business Visiting	652	4292	3620	952	490	252	1193	3049	717
Work	807	3957	2458	720	701	278	657	2714	1781
Sales or Service	158	417	774	317	200	76	299	543	177
Freight Loading/ Unloading	373	447	1312	438	375	121	721	994	494
Passenger Loading/ Unloading	96	651	1113	136	145	188	115	397	74
Medical - Dental	17	53	1243	23	16	2	39	212	1
Social	197	355	1286	305	244	254	541	288	63
Home	343	233	883	423	372	274	146	73	38
Miscellaneous and Unknown	231	843	1150	381	175	139	333	556	138
TOTAL	3130	11,395	14,973	3926	2781	1602	5098	13,086	3594

1/ With vehicles parked within the Downtown Parking and Traffic Survey Area between 10 a.m. and 6 p.m.; data for known destinations (78.7% of all drivers surveyed).

SOURCE: San Francisco Downtown Parking and Traffic Survey conducted by the Department of Public Works, 1965.

Table 26: TRIP PURPOSE OF DRIVERS[1/] WALKING TO FUNCTIONAL AREAS OF DOWNTOWN SAN FRANCISCO BY NUMBER Part II

Trip Purpose	Functional Area							Total Drivers[1/]
	Financial-Admin.	S. of Mkt. East	S.of Mkt. Spec. Use	Portion S.of Mkt. Industry	S. of Mkt. Business & Gen. Serv.	Midtown Market	Broadway-Kearny	
Shopping	419	109	260	262	613	575	76	9588
Business Visiting	6817	2012	1232	1700	2230	1367	377	30952
Work	11414	5237	2436	2258	2651	1311	336	39716
Sales or Service	1178	475	317	408	533	234	99	6205
Freight Loading/ Unloading	1998	1106	934	971	1196	296	193	11969
Passenger Loading/ Unloading	650	282	157	141	285	114	23	4567
Medical - Dental	35	7	25	2	8	16	0	1699
Social	455	179	126	171	291	167	105	5027
Home	57	38	99	136	190	45	63	3413
Misc. & Unknown	984	576	409	477	748	283	81	7504
TOTAL	24,007	10,021	5,995	6,526	8,745	4,408	1,353	120,640

1/ With vehicles parked within the Downtown Parking and Traffic Survey Area between 10 a.m. and 6 p.m.; data for known destinations (78.7% of all drivers surveyed).

SOURCE: San Francisco Downtown Parking and Traffic Survey conducted by the Department of Public Works, 1965.

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Table 27: TRIP PURPOSE OF DRIVERS[1/] WALKING TO FUNCTIONAL AREAS OF DOWNTOWN SAN FRANCISCO BY PERCENT Part I

Trip Purpose	Functional Area								
	West of Civic Center	Civic Center	Hotel, Entertainment, Clubs, Medical	Portion Midtown Residential	Portion Nob Hill Residential	Nob Hill	China-town	Retail	Jackson Sq.& G.G.Resident.
Shopping	8	1	8	6	2	1	21	33	3
Business Visiting	21	38	24	24	18	16	23	23	20
Work	26	35	16	18	25	17	13	21	50
Sales or Service	5	4	5	8	7	5	6	4	5
Freight Loading/ Unloading	12	4	9	11	14	7	14	8	13
Passenger Loading/ Unloading	3	6	7	3	5	12	2	3	2
Medical - Dental	1	0[a/]	8	1	1	0[a/]	1	1	0[a/]
Social	6	3	9	8	9	16	11	2	2
Home	11	2	6	11	13	17	3	1	1
Miscellaneous & Unknown	7	7	8	10	6	9	6	4	4
TOTAL	100	100	100	100	100	100	100	100	100

a/ Less than 0.5 percent

1/ With vehicles parked within the Downtown Parking and Traffic Survey Area between 10 a.m. and 6 p.m.; data for known destinations (78.7% of all drivers surveyed).

SOURCE: San Francisco Downtown Parking and Traffic Survey conducted by the Department of Public Works, 1965.

Table 27 : TRIP PURPOSE OF DRIVERS[1] WALKING TO FUNCTIONAL AREAS OF DOWNTOWN SAN FRANCISCO BY PERCENT Part II

Trip Purpose	Functional Area							
	Financial-Admin.	S.of Mkt. East	S.of Mkt. Spec.Use	Portion S.of Mkt. Industry	S.of Mkt. Business & Gen. Serv.	Midtown Market	Broadway-Kearny	Total Drivers[1]
Shopping	2	1	4	4	7	13	5	8
Business Visiting	28	20	21	26	26	31	28	26
Work	48	52	41	35	30	30	25	33
Sales or Services	5	5	5	6	6	5	7	5
Freight Loading/ Unloading	8	11	16	15	14	7	14	10
Passenger Loading/ Unloading	3	3	2	2	3	3	2	4
Medical - Dental	0[a]	0[a]	0[a]	0[a]	0[a]	0[a]	--	1
Social	2	2	2	3	3	4	8	4
Home	0[a]	0[a]	2	2	2	1	5	3
Miscellaneous & Unknown	4	6	7	7	9	6	6	6
TOTAL	100	100	100	100	100	100	100	100

a/ Less than 0.5 percent

1/ With vehicles parked within the Downtown Parking and Traffic Survey Area between 10 a.m. and 6 p.m.; data for known destinations (78.7% of all drivers surveyed).

SOURCE: San Francisco Downtown Parking and Traffic Survey conducted by the Department of Public Works, 1965.

Table 28: ACCUMULATION OF NON-COMMERCIAL VEHICLES, 10 A.M. to 6 P.M. IN FUNCTIONAL AREAS OF DOWNTOWN SAN FRANCISCO

Functional Area	(Percent of Peak Accumulation of Vehicles) Accumulation - Time of Day 10 a.m.	11 a.m.	Noon	1 p.m.	2 p.m.	3 p.m.	4 p.m.	5 p.m.	6 p.m.	Peak 1/ Accumulation, Number
West of Civic Center	100			2/				69	47	1575
Civic Center	100							71	39	3329
Hotel, Entertainment, Clubs and Medical	77	86				100		89	75	5395
Portion of Midtown Residential			100						84	1363
Portion of Nob Hill Residential				100				82	76	1708
Nob Hill Special	82	85			100	83	78	75	75	415
Chinatown	69	84		100				87	89	630
Retail	69	82			100		87	71	47	2916
Jackson Square & Golden Gateway				100				68	37	2023
Finance - Administrative				100				70	44	8542
S. of Market - East		100						57	30	6826
" " " - Special Use				100				62	32	3405
Portion of S. of Market Light Industry	100							67	39	2464
S. of Market Business & General Service	80	88		100				75	56	4604
Midtown Market	87			100			89	66	47	1100
Broadway - Kearny	78	83		100	88	86	77	73	59	677
Unknown	95	87			100		88	80	54	210
TOTAL				100				72	49	46657

1/ Peak accumulation between 10 a.m. - 6 p.m. only
2/ Area indicated by dotted line within 90% of peak accumulation.

SOURCE: San Francisco Downtown Parking and Traffic Survey conducted by the Department of Public Works, 1965.

Table 29: WALKING DISTANCE FROM PARKED VEHICLE TO DESTINATION FOR SHOPPING TRIP PURPOSES, DOWNTOWN SAN FRANCISCO

(Percent of Total [redacted] Trips)

Functional Area	Walking Distance (feet) 0-49	50-249	250-499	500-999	1000-1499	1500+	Total	Number of Trips 1/
1. West of Civic Center	21.0	52.4	21.4	4.8	--	0.4	100.0	248
2. Civic Center	27.4	28.8	26.7	8.9	2.0	6.2	100.0	146
3. Hotel, Entertainment, Clubs, Medical	18.4	10.2	20.1	25.4	12.4	13.5	100.0	1125
4. Portion of Midtown Residential	34.7	18.5	20.5	17.4	6.2	2.7	100.0	231
5. Portion of Nob Hill Residential	15.9	27.0	22.2	17.5	6.3	11.1	100.0	63
6. Nob Hill Special	22.2	22.2	--	50.0	--	5.6	100.0	18
7. Chinatown	17.0	18.6	28.3	18.0	12.5	5.6	100.0	1053
8. Retail	6.2	5.6	19.2	27.7	28.9	12.4	100.0	4242
9. Jackson Square & Golden Gateway	19.1	45.5	20.9	10.9	0.9	2.7	100.0	110
10. Financial - Administrative	18.0	16.8	18.2	22.5	9.6	14.9	100.0	417
11. S. of Market- East	20.2	16.5	18.4	30.3	7.3	7.3	100.0	109
12. S.of Market-Special Use	34.7	18.5	20.5	17.4	6.2	2.7	100.0	259
13. Portion of S. of Mkt. Light Industrial	52.1	15.7	19.1	11.5	0.8	0.8	100.0	261
14. S. of Market Business & General Service	31.2	11.3	20.2	32.5	2.6	2.3	100.0	613
15. Midtown Market	23.3	20.3	25.1	20.2	5.4	5.7	100.0	575
16. Broadway - Kearny	23.7	34.2	25.0	14.5	2.6	--	100.0	76
TOTAL	15.6	13.5	21.0	23.6	17.0	9.3	100.0	9546

1/ Walking distances are for drivers of parked vehicles; unknown data are omitted from totals.

SOURCE: San Francisco Downtown Parking and Traffic Survey conducted by the Department of Public Works, 1965.

Table 30: WALKING DISTANCE FROM PARKED VEHICLE TO DESTINATION FOR WORK TRIP PURPOSES, DOWNTOWN SAN FRANCISCO

Functional Area	Percent of Total Work Trips Walking Distance (feet) 0-49	50-249	250-499	500-999	1000-1499	1500+	Total	Number of Trips 1/
1. West of Civic Center	30.1	23.3	25.9	6.8	5.3	8.6	100.0	806
2. Civic Center	18.4	13.2	28.0	24.1	8.2	8.1	100.0	3945
3. Hotel, Entertainment, Clubs & Medical	23.5	12.6	20.2	25.4	10.0	8.3	100.0	2453
4. Portion of Midtown Residential	28.2	28.1	34.4	5.7	2.2	1.4	100.0	720
5. Portion of Nob Hill Residential	27.3	13.7	39.1	13.6	2.6	3.7	100.0	700
6. Nob Hill Special	23.3	11.9	17.3	42.4	2.2	2.9	100.0	278
7. Chinatown	25.9	23.8	29.3	14.6	2.9	3.5	100.0	656
8. Retail	7.5	5.8	15.2	23.1	21.2	27.2	100.0	2709
9. Jackson Square & Golden Gateway	27.6	22.0	25.3	15.7	7.2	2.2	100.0	1781
10. Financial-Administrative	11.0	11.9	20.2	22.4	12.0	22.5	100.0	11,399
11. South of Market - East	27.3	11.4	21.8	25.0	7.5	7.0	100.0	5226
12. S. of Market-Special Use	36.6	10.7	13.5	26.2	7.3	5.7	100.0	2424
13. Portion of S. of Market Light Industrial	39.7	15.4	23.5	14.7	4.7	2.0	100.0	2235
14. S. of Market Business & General Service	27.2	16.7	21.9	23.2	4.5	6.5	100.0	2648
15. Midtown Market	28.4	9.2	28.0	26.4	4.4	3.6	100.0	1305
16. Broadway - Kearny	22.2	25.4	27.8	18.9	2.7	3.0	100.0	334
TOTAL	21.4	13.3	22.1	22.0	9.1	12.1	100.0	39,619

1/ Walking distances are for drivers of parked vehicles; unknown data are omitted from totals.

SOURCE: San Francisco Downtown Parking and Traffic Survey conducted by the Department of Public Works, 1965.

Table 31 : WALKING DISTANCE FROM PARKED VEHICLE TO DESTINATION FOR BUSINESS VISITING TRIP PURPOSES, DOWNTOWN SAN FRANCISCO

(Percent of Total Business Visiting Trips)

Functional Area	Walking Distance (feet) 0-49	50-249	250-499	500-999	1000-1499	1500+	Total	Number of Trips 1/
1. West of Civic Center	38.9	28.1	27.2	4.3	1.1	0.4	100.0	651
2. Civic Center	29.3	17.0	25.1	20.4	4.8	3.4	100.0	146
3. Hotel, Entertainment, Clubs & Medical	15.8	13.7	30.4	25.3	8.0	6.8	100.0	3610
4. Portion of Midtown Residential	34.3	20.7	30.8	10.9	1.2	2.1	100.0	951
5. Portion of Nob Hill Residential	25.5	15.9	35.0	17.2	2.7	3.7	100.0	489
6. Nob Hill Special	34.5	11.5	19.8	26.2	1.2	6.8	100.0	252
7. Chinatown	21.0	22.0	30.6	18.0	6.0	2.4	100.0	1193
8. Retail	9.8	9.1	23.5	28.6	14.9	14.1	100.0	3038
9. Jackson Square & Golden Gateway	21.6	26.4	36.8	12.0	1.7	1.5	100.0	717
10. Financial-Administration	13.7	17.7	26.8	23.7	8.8	9.3	100.0	6811
11. S. of Market East	33.2	15.0	25.3	19.4	3.1	4.0	100.0	1992
12. S. of Market Special Use	37.0	16.0	17.3	20.9	3.6	5.2	100.0	1227
13. Portion of S. of Market Light Industrial	36.2	14.5	23.6	20.6	2.5	2.6	100.0	1685
14. S. of Market Business & General Service	25.6	16.6	30.0	21.2	4.0	2.6	100.0	2226
15. Midtown Market	32.5	9.2	26.6	24.5	3.8	3.4	100.0	1363
16. Broadway - Kearny	18.6	27.4	29.8	17.3	4.8	2.1	100.0	376
TOTAL	22.9	16.1	26.9	21.7	6.4	6.0	100.0	30,869

1/ Walking distances are for drivers of parked vehicles; unknown data are omitted from totals.

SOURCE: San Francisco Downtown Parking and Traffic Survey conducted by the Department of Public Works, 1965.

Table 32: TRIP PURPOSE OF DRIVERS WALKING FROM SELECTED GARAGES, DOWNTOWN SAN FRANCISCO

Garage	Percent of Total Trip Purposes: Shopping	Business Visiting	Work	Sales or Service	Medical Dental	Social	Other[1] and Unknown	Total	Number of Total Trip Purposes[2]
Portsmouth Square	12.5	16.5	32.3	0.7	0.9	12.4	24.6	100.0	999
St. Mary's Square	5.1	32.2	37.6	0.7	0.3	2.3	21.7	100.0	1169
Union Square	44.9	19.2	6.2	1.3	6.1	7.5	14.8	100.0	2299
Lick Place	9.8	34.8	35.3	1.6	0.3	2.7	15.5	100.0	695
Sutter - Stockton	21.3	21.5	16.9	1.0	19.3	4.9	15.0	100.0	1995
Downtown Center	13.4	18.6	17.3	2.2	3.9	15.4	29.2[3]	100.0	1655
Ellis - O'Farrell	31.2	15.4	26.9	0.9	3.2	2.6	19.8	100.0	1000
Fifth & Mission	46.3	19.8	16.1	1.5	3.7	1.8	10.9	100.0	3178
Civic Center	0.9	24.4	50.8	3.8	0.1	0.8	19.3	100.0	1063
Russ Bldg.	.5	11.5	64.6	1.1	--	1.4	20.9	100.0	364
Total	25.8	21.1	23.1	1.5	5.2	5.5	17.8	100.0	14417

1/ Includes Freight & Passenger Loading & Unloading, Home, Misc., & Unknown.
2/ Represents drivers parked between 10:00 a.m. and 6:00 p.m.
3/ Includes 7.9% for "Home".
SOURCE: San Francisco Downtown Parking and Traffic Survey Conducted by the Department of Public Works, 1965.

Table 33: TRIP PURPOSE FOR DRIVERS WALKING TO SELECTED BUILDINGS, DOWNTOWN SAN FRANCISCO

Building Name	Percent of Total Trip Purposes							Number of Total Trip Purposes 1/
	Shopping	Business	Work	Sales or Service	Freight	Other & Unknown	Total	
Pacific Telephone	--	8.0	70.0	6.5	6.1	9.5	100.0	263
Furniture Mart	5.2	38.1	38.6	6.3	6.3	5.4	100.0	1030
Federal Bldg.	0.2	45.8	40.8	2.1	1.3	9.8 2/	100.0	1261
Hilton Hotel	1.4	25.3	9.7	2.1	1.6	59.9 3/	100.0	943
Flood Bldg.	22.8	29.6	23.2	7.1	10.6	6.8	100.0	311
Macy's	70.5	11.1	9.4	2.6	1.6	4.8	100.0	774
St.Francis Hotel	6.4	25.5	11.9	3.7	4.3	48.2 4/	100.0	624
450 Sutter	1.5	10.7	23.5	1.9	2.5	59.9 5/	100.0	1231
Mark Hopkins	0.6	8.3	8.6	2.6	4.2	75.7 6/	100.0	313
International	1.0	35.4	48.4	2.2	5.8	7.2	100.0	415
Bank of America	--	30.9	53.3	4.5	5.8	5.5	100.0	330
Equitable	0.3	32.7	54.4	5.0	5.9	2.7	100.0	339
Russ Bldg.	0.4	28.0	60.0	2.1	5.7	3.8	100.0	707
Crown-Zellerbach	0.9	31.8	50.9	4.1	4.1	8.4	100.0	466
Appraisers Bldg.	0.3	50.0	39.3	3.7	1.8	5.0	100.0	382
Insurance Securities	0.3	33.5	53.5	1.9	6.6	4.1	100.0	316

1/ Represents Drivers parked in survey area between 10 a.m. and 6 p.m.
2/ Includes 4.9% for passenger loading/unloading.
3/ Includes 13.5% for passenger loading/unloading.
4/ Includes 12.7% for Social.
5/ Include 54.3% for Medical-Dental.
6/ Includes 62.3% for Home.

SOURCE: San Francisco Downtown Parking and Traffic Survey conducted by the Department of Public Works, 1965.

Table 34: OFF-STREET PARKING SPACES AVAILABLE BY FUNCTIONAL AREAS, DOWNTOWN SAN FRANCISCO

Functional Area	Parking Facility Classification				
	Commercial	Private Customers	Private Employees	Government Officials	Total
1. West of Civic Center	196	137	183	510	1,026
2. Civic Center	2,186	160	99	460	2,905
3. Hotel, Entertainment, Clubs & Medical	7,144	608	288	0	8,040
4. Portion of Midtown Residential	1,368	271	71	20	1,730
5. Portion of Nob Hill Residential	428	0	124	0	552
6. Nob Hill	923	242	30	0	1,195
7. Chinatown	951	0	108	0	1,059
8. Retail	2,021	17	40	0	2,078
9. Jackson Square and Golden Gateway	1,556	0	241	240	2,037
10. Financial - Administrative	7,416	68	607	40	8,131
11. S. of Market East	5,508	5	1,192	793	7,498
12. S. of Market Special Use	4,436	79	509	125	5,149
13. Portion S. of Market Light Industry	1,310	169	394	246	2,119
14. S. of Market Business and General Service	3,162	337	538	0	4,037
15. Midtown Market	1,111	320	0	136	1,567
16. Broadway - Kearny	454	37	0	0	491
TOTAL	40,170	2,450	4,424	2,570	49,614

SOURCE: San Francisco Downtown Parking and Traffic Survey conducted by the Department of Public Works, 1965.